National Park Service
U.S. Department of the Interior

Big Bend National Park
Rio Grande Wild & Scenic River
Big Bend National Park, Texas

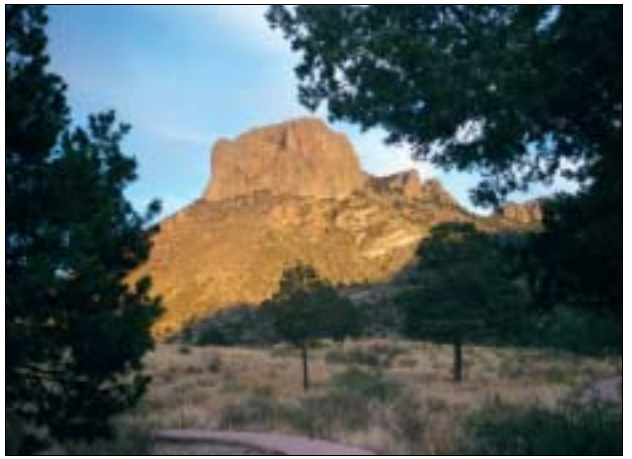
Big Bend National Park Business Plan

Big Bend National Park Business Plan

Mission Statements

Big Bend National Park

"The National Park Service at Big Bend National Park preserves and protects a representative area of the Chihuahuan Desert along the Rio Grande for the benefit and enjoyment of present and future generations. The park includes rich biological and geologic diversity, cultural history, recreational resources and outstanding opportunities for bi-national protection of shared resources."



L. Ritzen

Rio Grande Wild & Scenic River

"The National Park Service at the Rio Grande Wild and Scenic River preserves and protects free-flowing natural and scenic conditions of the river and its immediate environment for the benefit of present and future generations."

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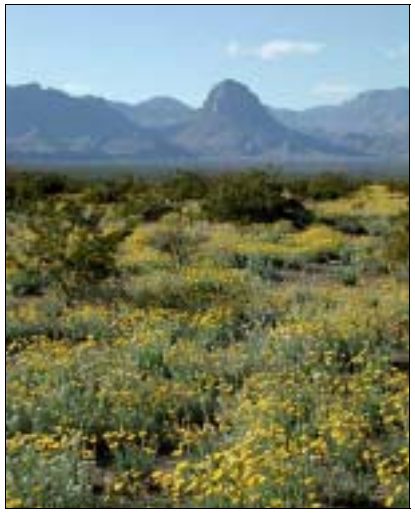


G. Regner

S. Harmon

For more information pertaining to this Business Plan:

Frank J. Deckert
Superintendent
Big Bend National Park
Big Bend National Park, TX 79834

Superintendent's Foreword

J. Bishop

Viewing a sunset from the Chisos Basin or floating through Santa Elena Canyon are just two of the awesome and unforgettable experiences enjoyed by thousands of visitors to Big Bend National Park each year. Few of these park visitors, however, realize the breadth and complexity of the behind the scenes issues faced by the park staff on a daily basis. We are involved with law enforcement, education, resource management, administration, facility management, maintenance and international relations.

This management challenge is compounded by the balancing act created by our legislative mandate: to preserve and protect this unique area, while also providing for its enjoyment by the American people.

At this dawn of the new millennium, Big Bend faces challenges unimagined by its founders more than a half century ago. Visibility impairment, diminished Rio Grande water flow, an aging infrastructure and increasing operating costs threaten the values for which your park was established.

If we are to manage these resources responsibly, we must clearly communicate to the public the challenges we face and the funding we need to meet those challenges. Together, we can help to ensure that Big Bend's sunsets and canyons will remain awesome and unforgettable into the next millennium.

Thank you for caring enough to take a closer look at Big Bend National Park.

Frank J. Deckert
Superintendent

The Business Plan Initiative

What is the Business Plan Initiative (BPI)?

The BPI was initiated in the summer of 1998 and is a unique partnership between the National Park Service (NPS), the National Parks Conservation Association (NPCA) and a consortium of philanthropic organizations led by the Kendall Foundation. The program is directed at identifying the financial and personnel shortfalls at a specific park, which is what makes the BPI so unique — the shortfalls outlined in this business plan are not generic shortfalls across the National Park Service, but instead are specific shortfalls at Big Bend National Park. The process and identification of shortfalls is completed with the help of graduate students from top MBA and public policy schools who spend their summer internship assisting park personnel define the financial and staffing deficits.

How are the required resources measured?

Park information from all five park divisions was compiled, analyzed and redesigned into a structured, activity- based accounting format used by all the BPI parks to ensure the consistent analysis of information from park to park. The information in this plan was collected through the use of interviews and the completion of numerous forms known as *Detail Sheets*. The park staff completed *Detail Sheets* to identify the operational standards necessary to reach a level of operation that is sufficient to satisfy the park's mission. The individual operating standards were translated into hours and positions (e.g. "a Grade 3 employee should clean the bathroom at visitor headquarters daily. This takes 2 hours per cleaning."). The individual standards were used to identify the projected staff and time requirements for a specific program. Then historical availability of staff was compared with what was needed from the operating standards to understand what the park ***should*** be doing against what it ***has*** been doing. This analysis was then used to identify resource gaps and shortfalls that were rigorously examined by the consultant team and park staff to ensure their validity before being incorporated into this document.

The following chart displays the breakout of Functional Areas and activity- based programs that were analyzed.

Functional Areas	Resource Protection	Visitor Experience and Enjoyment	Facility Operations	Maintenance	Management and Administration
Program Areas	Cultural Resources	Visitor Protection	Buildings Operations	Buildings Maintenance	Communications
	Resource Protection	Visitor Center Operations	Fleet Operations	Fleet Maintenance	Parkwide Planning
	Wildlife Management	Interpretation	Roads Operations	Roads Maintenance	Parkwide Safety
	Info. Integration and Analysis	Search and Rescue / EMS	Trails Operations	Trails Maintenance	General Management
	Geology/Paleontology/Soils	Environmental Education	Utilities Operations	Utilities Maintenance	General Administration
	Vegetation Management	Fee Collection	Campgrounds Operations	Management and Administration	External Affairs
	Wildland Fire Control	Structural Fire	Grounds Operations		Financial Management
	Air and Water Management	Cooperating Association Coordination	Janitorial Operations		
	Management and Administration	Visitor Use Services	Management and Administration		
		Management and Administration			

Everybody knows the Park Service is under funded. The question is not 'if,' but rather 'by how much.'

Executive Summary

Big Bend National Park (Big Bend) and the Rio Grande Wild & Scenic River (RIGR) are located in West Texas at the 'big bend' of the Rio Grande. Big Bend is larger than the state of Rhode Island and received an average 308,000 visitors per year since 1995. The park has national significance as the largest protected area of Chihuahuan Desert topography and ecology in the United States. RIGR is part of a valuable ecological system that represents the major riparian and aquatic habitat associated with the Chihuahuan Desert. The National Parks Conservation Association recently listed Big Bend as one of the ten most endangered parks in the 384- unit park system.

Fund Sources: In FY2000, 62% of the park's funding came from annually recurring Operation of the National Park Service (ONPS) Base funds appropriated by Congress. The remaining 38% was sourced from non- recurring accounts such as Project money (16%), Revenue income (10%), Reimbursable accounts (3%), and as the dollar value of volunteer hours contributed to Big Bend (9%).

Historical Funding Analysis: Since 1980, ONPS Base funding increased at a Compounded Annual Growth Rate* (CAGR) of 5.3%. When adjusted for inflation, ONPS Base funding increased by a mere CAGR of 1.5%. Moreover, most of that growth occurred between 1980 and 1984. Since 1984, inflation- adjusted funding has barely grown at all — a mere 0.4% CAGR.

Historical Funding versus Expenditure Analysis: Since 1990, Big Bend's inflation- adjusted ONPS Base funding increased $551,638. Inflation- adjusted salaries and benefits during that same period, however, increased $926,250. This $374,612 gap clearly shows that ONPS Base funding has not kept pace with the increasing personnel costs – and the majority of the increase in personnel costs was a direct result of government mandates, such as the conversion to a new pension plan and the initiation of ranger salary adjustments.

Historical Expenditures: Park operations are broken into five functional areas. In FY2000, Visitor Experience and Enjoyment accounted for 26% of total expenditures followed by Facility Operations (23%), Maintenance (20%), Management and Administration (16%) and finally Resource Protection (15%).

Financial and Staffing Shortfall:** Big Bend and RIGR have a staffing and financial shortfall of 69.5 FTEs *(18.6 non- permanent/50.9 permanent)* and $6.1 million ($*0.7 million non- permanent/$5.4 million permanent)* to meet the required operational standards. The largest shortfall was identified in the area of Resource Protection where 26.7 FTEs *(12.9 non- permanent/13.4 permanent)* and $1.8 million are needed. The park is currently 40% underfunded in FTE terms.

Investment Needs: In addition to operating needs, the park's investment needs total $33.4 million. The two functional areas with the largest investment needs are Maintenance and Resource Protection, at $19.8 million and $7.7 million, respectively.

Financial Strategies: As Big Bend's staffing size, visitation and resource threats increase, the park will have to be run more and more efficiently to accommodate the shortfall in funds. Operational as well as financial efficiencies can be achieved by instilling a business mentality in park personnel , through training staff in business analysis skills and by thinking 'out of the box.'

GPRA Analysis: The purpose of the Government Performance and Results Act of 1993 (GPRA) is to make government more effective and more efficient. Big Bend focuses 52% of its dollars and efforts on activities that concentrate on GPRA Goal IIA, which stresses visitor safety and enjoyment. This is followed by Goal 1A (16% of all efforts), which stresses natural and cultural preservation. The remaining 32% is distributed between seven other goals.

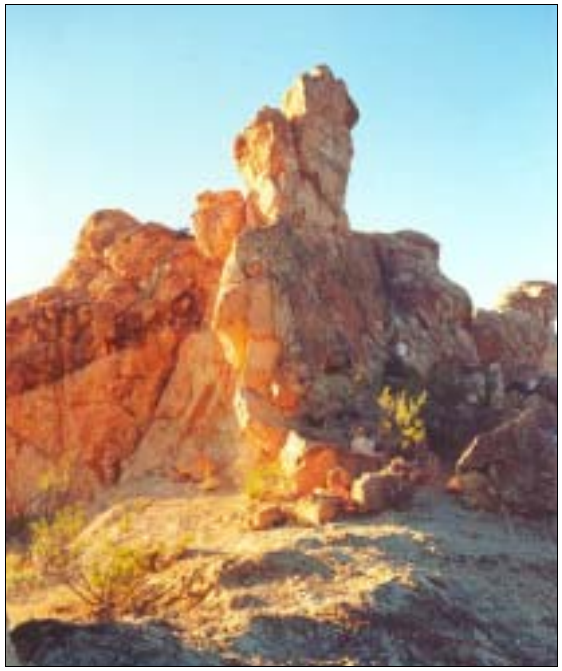
* CAGR = Compounded Annual Growth Rate is the constant yearly growth rate at which an amount grows over a specified period of time.
** FTE = One Full- Time Equivalent translates into 2,080 hours of work per year.

Big Bend National Park Background

"It is a desert- mountain country whose qualities offer an allurement, a satisfaction of the soul, only if the visitor will put himself in the right mood, and will remain long enough to know it with some intimacy ..."

Freeman Tilden 1945

Formerly Big Bend State Park, Big Bend was authorized as a national park on June 20, 1935, and then established and signed into law — with strong support from Franklin D. Roosevelt— on June 12, 1944, as the nation's 27th national park. Big Bend Country, as the area in the heart of a semi-arid region of West Texas has become known, is bounded on the south by the Rio Grande and on the north by an imaginary line between the towns of Van Horn on the west and Langtry on the east. It takes its name from the course of the Rio Grande which makes a great bend to the south between those towns, cradling the park in the lower extremity of its erratic course.



M. Schuler

Slightly larger than Rhode Island, the park comprises more than 800,000 acres (1,252 square miles). The boundary includes 118 miles of the Rio Grande which is also the international border between the United States and the Republic of Mexico. In 1978, Congress designated a 196- mile portion of the Rio Grande, from the Chihuahua/ Coahuila state line to the Terrell/Val Verde county line, as a Wild and Scenic River. The upper 69 miles lie within Big Bend National Park.

The park exhibits dramatic contrasts; its climate may be characterized as one of extremes. As a result of the range in altitude from approximately 1,700 feet along the river to 7,800 feet in the Chisos Mountains, a wide variation in available moisture and in temperature exists throughout the park. These variations contribute to the great diversity in plant and animal habitats, which are being threatened by detrimental external factors such as the rapidly deteriorating air quality and the more recent decline in water levels in the Rio Grande.

Big Bend has national significance as the largest protected area of Chihuahuan Desert topography and ecology in the United States. The park's river, desert and mountain environments support an extraordinary richness of biological diversity and provide unparalleled recreation opportunities. Moreover, few areas exceed the park's value for the protection and study of geologic and paleontologic resources. Fossilized organisms from the Cretaceous and Tertiary periods exist in variety and abundance. Archaeologists have discovered artifacts estimated to be 9,000 years old, and historic buildings and landscapes offer graphic illustration of life along the international border at the turn of the century. Big Bend is rich in economic, cultural and military history from its extensive use by Comanches, miners, farmers, ranchers, U.S. cavalry units and Pancho Villa's revolutionaries.

Big Bend National Park was designated a Biosphere Reserve in 1976 by UNESCO under their program on Man and the Biosphere. Big Bend is one of only 250 such areas worldwide whose ecosystems are particularly well preserved.

Big Bend At A Glance

General:
801,163 acres
(15th largest in the Park System)

118 miles of shared border with Mexico
(245 miles when including the Rio Grande Wild and Scenic River)

Natural Resources:
1,200+ plant species
56 reptile species
75 mammal species
3,600 insect species
11 amphibian species
40 fish species
450 bird species
400+ paleo sites *(est.)*
6 threatened and endangered species

M. Schuler

Cultural Resources
1,400+ archeological sites
- only 3% of park surveyed
76 historic structures
10 historic districts/sites

Visitation:
308,000 visitors on average per year since 1995

Human Resources:
99 Full- time equivalents
180 volunteers (35,300 volunteer hours)

Buildings & Vehicles:
25 vehicles in fleet
218 buildings
- 89 residential buildings
- 76 historic structures
- 17 administrative & 36 concession

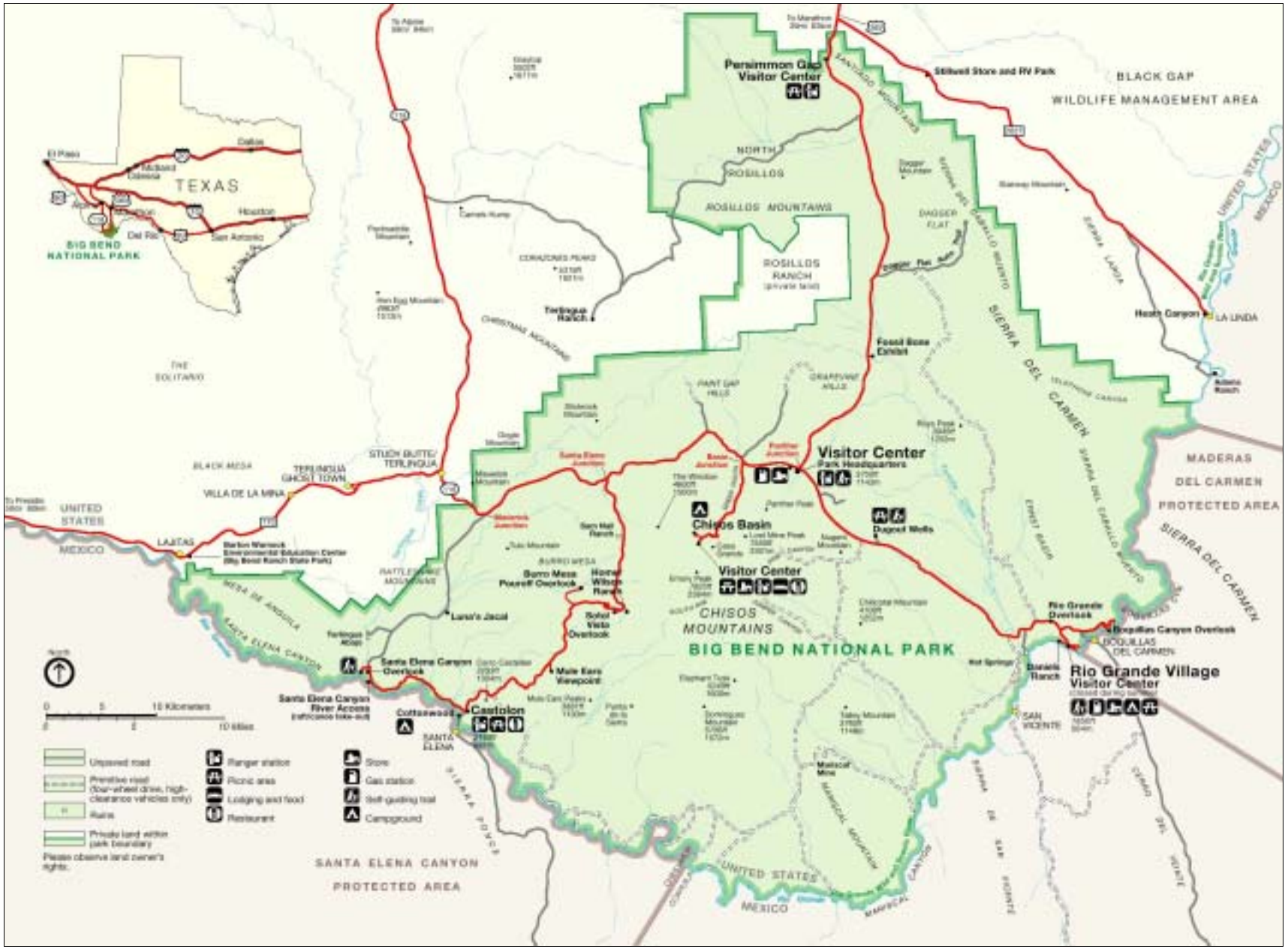
Roads:
330 miles of roads:
- 123 miles of paved road
- 71 miles of improved dirt roads
- 136 miles of primitive dirt roads

Trails & Campgrounds:
201 miles of trails
19 trailheads
3 campgrounds
310 camping sites
- 194 front- country
- 116 backcountry

25 RV hookups

Park Map

Slightly larger than the state of Rhode Island, Big Bend covers more than 800,000 acres.



Funding

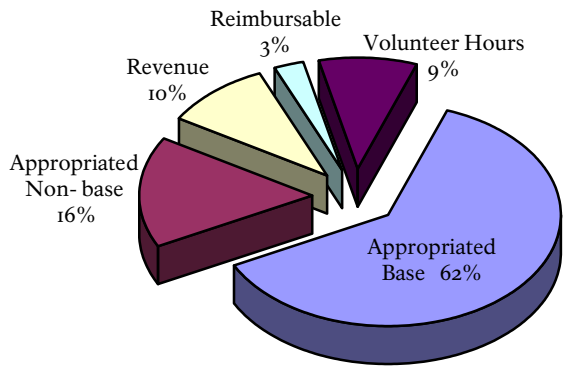
National parks procure funds from four separate sources. Congress appropriates the first source (**Appropriated Base**) annually. The park uses these funds primarily to pay for its operational needs. The second source (**Appropriated non- base**) is also appropriated by Congress, but consists of non- recurring project money which is requested by a park to satisfy one- time project needs. These funds are managed centrally by the National Park Service and are distributed annually on a competitive basis. The third source (**Reimbursable**) is reimbursable income, collected from services that the park renders such as issuing various sorts of permits, providing ambulance services, etc. The fourth source (**Revenue**) comes from visitors in the form of fees or from external entities in the form of donations. In addition to funds received from these sources, Big Bend benefits significantly from the contributions of volunteers. Using the hourly rate of $14.83 (the average wage rate of non- agricultural workers in the United States as published by the group *The Independent Sector*) the dollar value of volunteer hours in FY2000 was $649,650.

In order to operate efficiently from year to year, a park relies significantly on its ONPS Base funding. Especially since Project, Reimbursable and Revenue funds are unpredictable and vary on a yearly basis. As ONPS Base funding decreases, parks find it increasingly difficult to pay their operational expenses such as employee salaries and benefits.

As the data below show, the total of Big Bend's FY2000 funds was $7.1 million. Approximately 62% was ONPS Base appropriated.

	Dollar Amount	%
Appropriated Base (ONPS)	$4,371,600.00	61.96%
Appropriated non- base (Project)	$1,132,023.70	16.04%
Revenue	$712,815.10	10.10%
Reimbursable	$189,227.20	2.68%
Volunteer Hour Value	$649,650.00	9.21%
Total	**$7,055,316.00**	**100.00%**

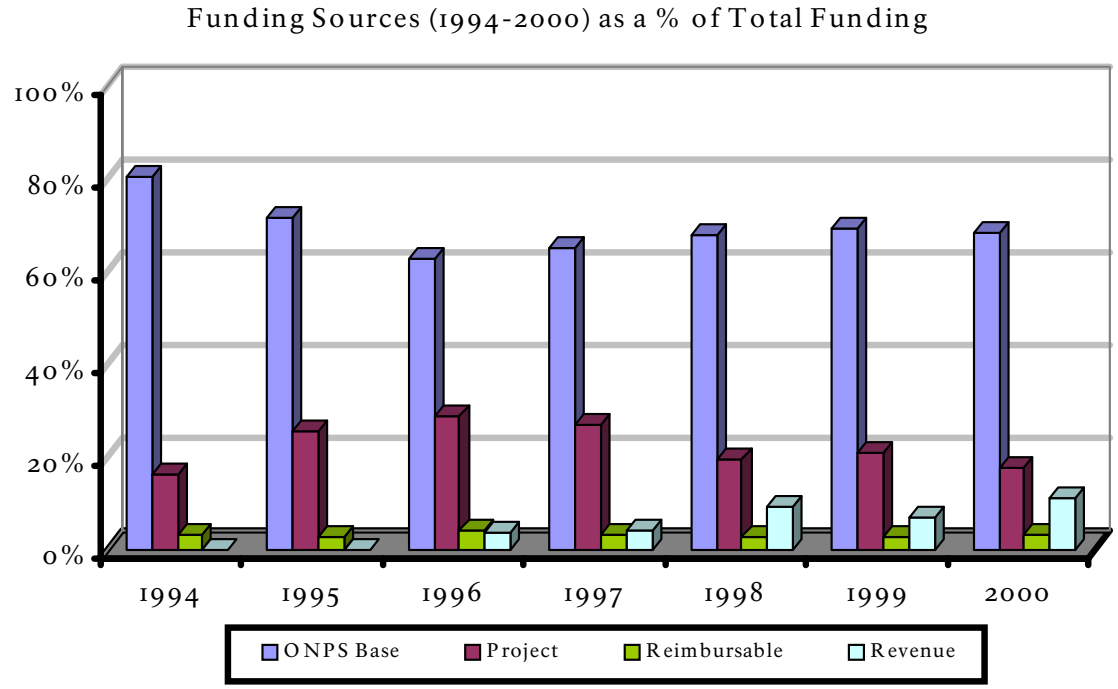
Big Bend NP FY 2000 Funding



Funding Trends

Between 1994 and 2000, Big Bend's funding came primarily from ONPS Base funds, which is appropriated by Congress. In 1994 ONPS Base funding comprised 80% of total funding. However, by 1996 ONPS Base funding had dropped to 63% of total funding. Slowly, ONPS Base funds increased again, but they still only comprised 62% of total funding in FY2000.

Fortunately, the commencement of the Fee Demo program in 1997 allowed Big Bend to use 80% of the fees it collected rather than returning 100% of its fees to the U.S. Treasury. Fee Demo money however still comprises less than 11% of total funding. (Fee Demo funds are lumped together with donations in the Revenue category below.)

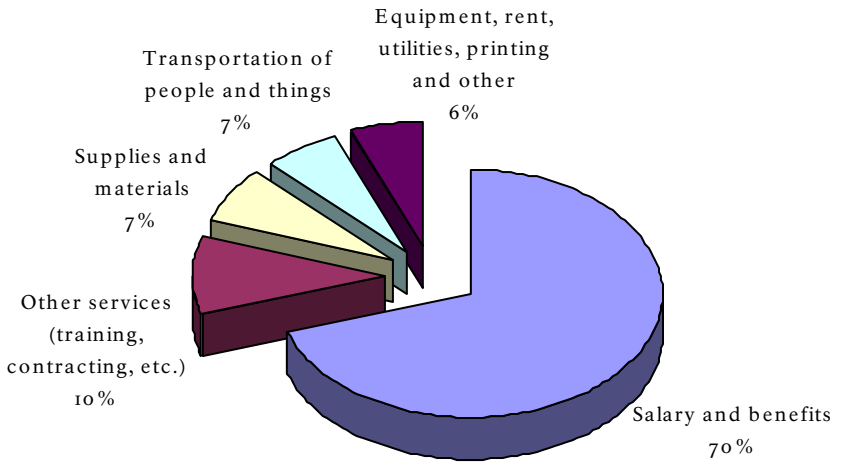


Expenses

Like any other business, Big Bend has costs associated with its operations. In FY2000, the park spent approximately $6.18 million on various activities. Approximately 70% was spent on salaries and benefits followed by 10.2% on other services. The category of other services includes tuition fees, training fees, contracts, etc.

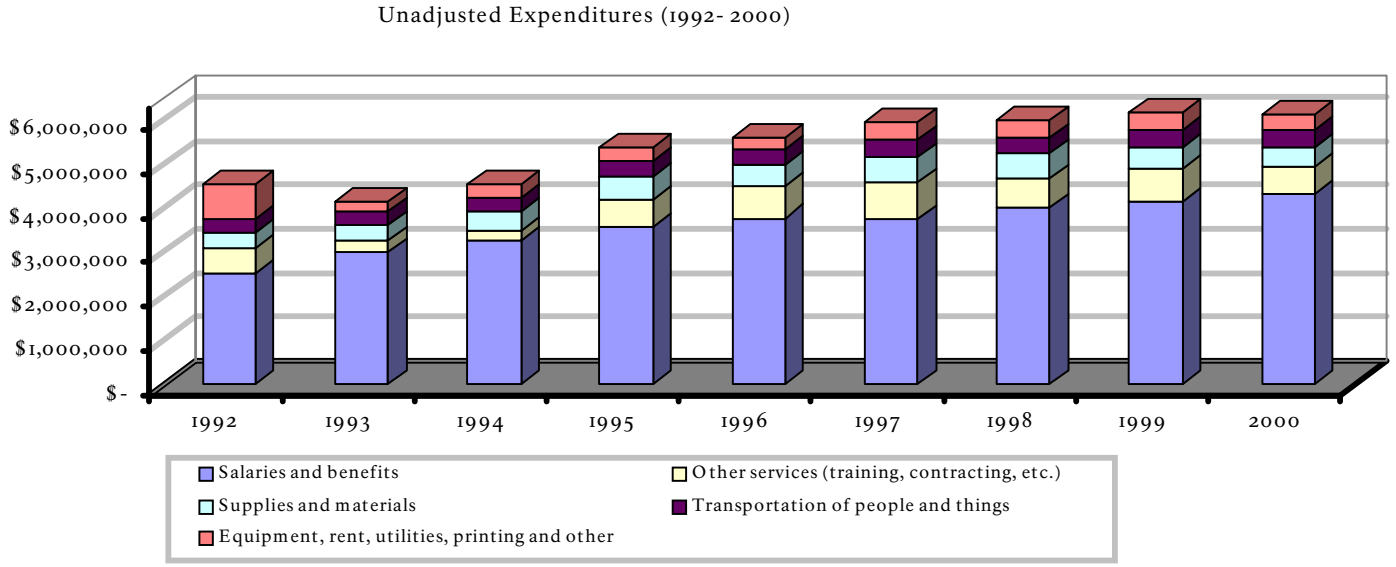
		Dollars	%
Salary and benefits	$	4,333,814.3	70.1%
Other services (training, contracting, etc.)	$	623,761.0	10.1%
Supplies and materials	$	448,455.6	7.3%
Transportation of people and things	$	406,797.9	6.6%
Equipment, rent, utilities, printing and other	$	370,788.6	6.0%
Total	**$**	**6,183,617.3**	**100.0%**

Park Expenditures by Category in FY2000



Expense Trends

To expand further upon Big Bend's costs, between FY1992 and FY2000, the park's total expenditures increased from $4.5 million to $6.1 million at a Compounded Annual Growth Rate (CAGR) of 3.87%. On average, salaries and benefits were 65.3% of total expenditures over the past eight years. On a special note, in FY1997 the park spent $1.6 million on new housing for seven additional units. This one-time investment increased total expenditures in FY1997 and hence should be disregarded when analyzing recurring operating expenditure trends. Disregarding the housing project, **Big Bend's total expenditures have not increased since FY1997.** The slowdown in expenditures is not because the park's operating needs are being met, but is due to stagnant funding growth, which has prevented the park from expanding on overdue research projects, initiating maintenance projects, conducting visitor educational projects and addressing increased border and safety patrol issues.



Salaries and Benefits

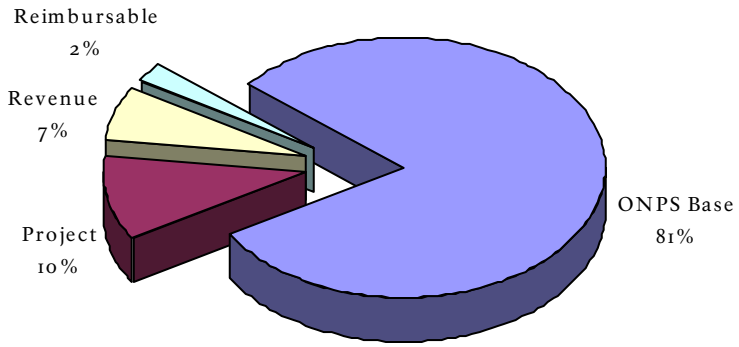
(Note: Since salaries and benefits comprise such a large percentage of total expenditures, this section was added to briefly analyze this expense item.)

Salaries and benefits should be funded primarily by ONPS Base funds, which are recurring and are guaranteed on a yearly basis. However, a closer look at FY2000 revealed that 19% of all salaries and benefits were paid from non-recurring and unpredictable sources (i.e. Project, Revenue and Reimbursable accounts). This implies that if non-recurring sources are not funded properly in the coming years, Big Bend will see the need to cut back on its workforce, thereby adding to the already sizable staffing shortfall.

The change in the benefits system in particular has added to the increased cost of personnel at Big Bend. In 1984, the Federal Employees Retirement System (FERS) was implemented. FERS employees carry higher benefits than the former Civil Service Retirement System (CSRS) employees. In FY2000, FERS employees garnered 31.7% of their salary in benefits whereas CSRS employees only earned 17.3%. Sixty percent of employees were under FERS in FY1992 compared with 86% percent in FY2000. The constant increase in FERS employees has added an additional $220,643 in inflation- adjusted benefits alone.

	Dollars
ONPS Base	$ 3,483,053.24
Project	$ 448,320.06
Revenue	$ 296,976.78
Reimbursable	$ 105,464.25
Total Salaries and Benefits	**$ 4,333,814.33**

Which Source Paid for Salaries and Benefits in FY2000?



Net Funds

In FY2000, total income for Big Bend was $6.41 million and total expenditures were $6.18 million, leaving the park with total remaining funds of $222,049. So why is the park identifying a funding gap if it still has $222,049 at its disposal? The primary source, or 95%, of the remaining funds is from Fee Demo income, which is included in Revenue below. The park is saving some of its Fee Demo money to fund the construction of a badly needed science building, estimated at a total cost of $1.85 million. At the end of FY2000, Big Bend had a total balance of $787,421 in Fee Demo funds, including the $209,632 in 'remaining Revenue' from below. By using Fee Demo Funds, the park will not have to apply for additional funds from Congress and will have the opportunity to finance the project almost solely on its own. On a side note, Fee Demo funds can only be used for projects where visitors will see a direct benefit from the fees they pay, but Fee Demo funds are not to be used to fund permanent positions.

There are three other reasons why the park's income does not exactly match the park's expenses:

R. Lawson

1. The remaining ONPS Base funds do not carryover if they are not spent in a fiscal year. At the end of FY2000, Big Bend nearly broke even and had about $7,000 available in ONPS funding. The left over money was the result of purchase transactions that were logged into the park's accounting system at year end before the purchase was actually completed. After all the books had been closed, the actual purchases came through at lower prices than anticipated. As a result, the park's income in the form of ONPS Base exceeded expenses by approximately $7,000, a small surplus that did not carry over into FY 2001.

2. Certain Project funds are provided to a park for the duration of the project which can last up to three years. At the end of FY2000, Big Bend had $3,162 in Project money at its disposal, which carried over into FY2001 for an ongoing water system rehabilitation project in the Rio Grande Village district.

3. Reimbursable income includes money from the park's recycling operation, which is by law allowed to carry over income it receives.

	ONPS Base	Project	Reimbursables	Revenue *	Total
Income	$ 4,371,600	$ 1,132,024	$ 189,227	$ 712,815	$ 6,405,666
Expenses	$ 4,364,643	$ 1,128,862	$ 186,930	$ 503,183	$ 6,183,617
Remaining Funds	**$ 6,957**	**$ 3,162**	**$ 2,297**	**$ 209,632**	**$ 222,049**

* The $209,632 in 'available Revenue' will be carried forward to subsequent years to pay for the new science and research building

Volunteers

Volunteers are essential to the National Park Service. Big Bend's volunteers contribute as individuals and through a variety of programs including Volunteers In Park (VIP), Student Conservation Association (SCA), the National Civilian Community Corps (an Americorps Program), and the Sierra Club. They help out in all divisions, working as Campground Hosts, staffing visitor center information desks, giving interpretive programs, completing resource management projects, maintaining hiking trails, assisting with recycling and a variety of maintenance projects.

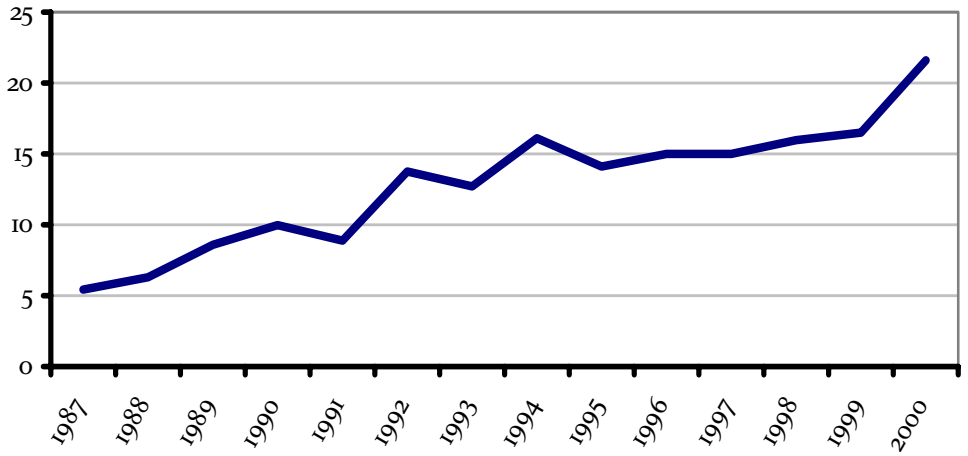
Although Big Bend proudly acknowledges that it has one of the highest volunteer participation rates in the National Park Service, the total number of hours clearly indicates the park's lack of funds to staff essential positions with seasonal or full- time employees. Volunteers at Big Bend undertake many of the basic functions that nonexistent staff members should be doing.

Between 1987 and 2000, the total number of volunteer hours contributed to Big Bend grew by 33,720, from 11,280 in 1987 to 45,000 in 2000. Using the hourly rate of $14.83 (the average wage rate of non- agricultural workers in the United States as published by the group *The Independent Sector*) the dollar value of volunteer hours in FY2000 was $649,650. (This figure takes into account costs associated with the volunteer program as described below.)

The FY2000 budget for the volunteer program was a mere $8,900, and was used for uniforms, reimbursement for propane and mileage on personal vehicles, training, supplies and recognition award items. This budget limited the park's ability to provide reimbursements for volunteers.

A simple analysis reveals that the total hours spent by volunteers in FY2000 translates into approximately 22 additional Full- Time Equivalents (FTE).

Volunteer Hours converted to FTEs
(1 FTE = 2,080 hours worked per year)

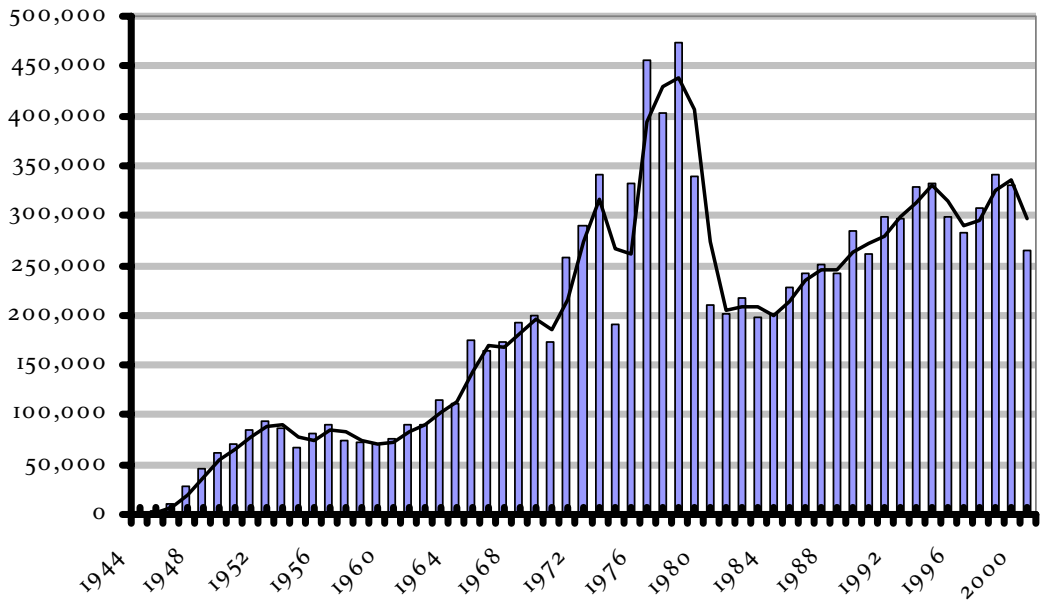


Park Visitation

Parks have a mission to preserve and protect natural and cultural resources. They also aim to raise awareness and educate the public on the resources at the park. Hence, tracking visitation and accommodating visitors has become a key function of the Park Service—especially as park visitation begins to exceed park capacity.

Big Bend is a destination; not a diversion on a road trip. As a result, visitation is mostly driven by what is happening in the park. The park's peak season is November- April and its off- peak season is May- October. During the spring when desert flowers are in full bloom, birds migrate and cooler temperatures allow for a broader range of outdoor activities, Big Bend experiences a surge in visitation from river rafters, bird watchers and enthusiastic botanists.

Annual Visitation (1944-2000) with Moving Avg. Trendline



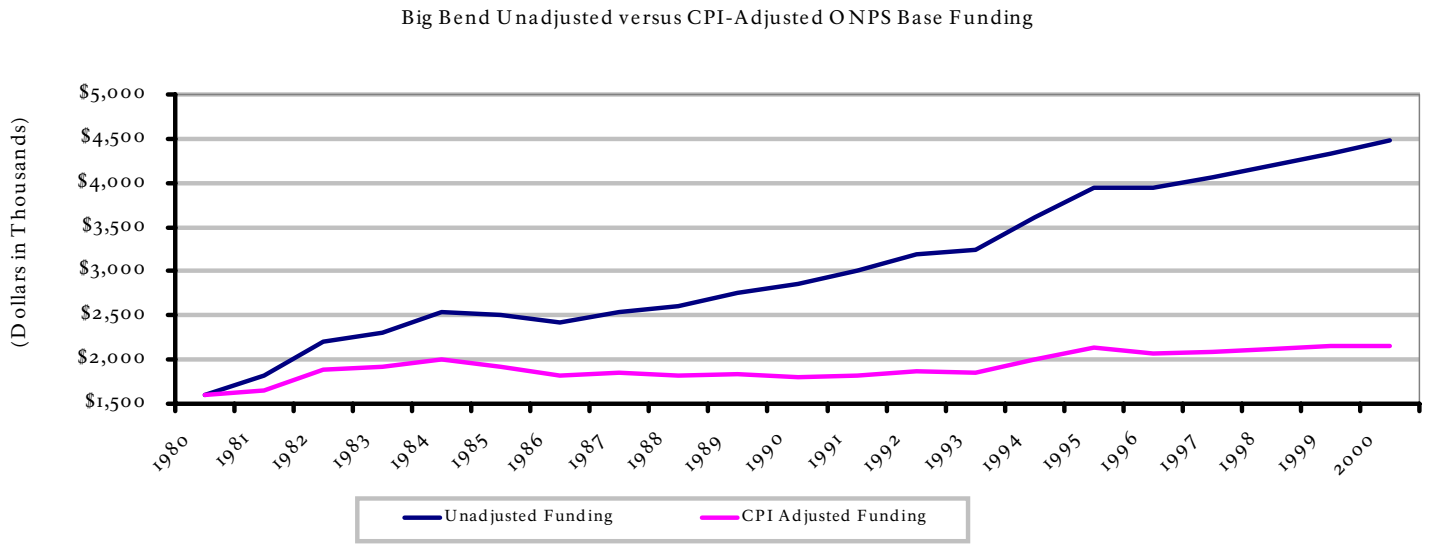
In the summer when some parts of the park are too hot to visit and the Rio Grande is low enough to walk across, the park experiences a slowdown in visitation. Over the past 20 years however, Big Bend has experienced growth in visitation with peaks and troughs ranging from 198,708 in 1983 to 340,806 in 1998. Since 1980, average annual visitation has been 270,308.

It appears that rises in the price of gasoline *(as witnessed by the two major oil shocks in the 70s)* affect visitation at Big Bend. Furthermore, shoulder seasons are not increasing. Instead, the park's peak season is growing denser with visitors who are still avoiding the slow season.

Inflation Adjusted Funding

In addition to increasing annual visitation rates, Big Bend has also experienced an increase in **nominal** ONPS Base funding (unadjusted funding). Since 1980, Big Bend's unadjusted funding increased by $2.9 million from $1.6 million in 1980 to $4.5 million in 2000 at a CAGR of 5.3%. However, when adjusted for inflation based on the government- published Consumer Price Index (CPI), the trend in ONPS Base funding paints an entirely different picture. CPI- adjusted funding increased by merely $0.5 million from $1.6 million in 1980 to $2.1 million in 2000 at a CAGR of 1.5%. Moreover, most of that growth occurred between 1980 and 1984. Since 1984, CPI- adjusted funding has not really grown at all — a mere 0.4% CAGR — despite a visitor CAGR of 1.7% within the same time frame.

The graph below shows increases in unadjusted funding versus the relatively flat CPI- adjusted funding amounts.



2000 Funding
Adjusted for Inflation

The following table shows how the inflation- adjusted increase in the ONPS Base budget from 1990 to 2000 clearly has not kept up with the inflation- adjusted increase in salaries and benefits for the same time period. This indicates that Big Bend had to seek funding sources other than ONPS Base funds to pay for its salaries and benefits.

Between 1990 and 2000, the average salary and benefits increased from $28,123 to $43,766. Adjusted for inflation, using 1990 as the base year, the average salary and benefits increased from $28,123 to $33,128. Moreover, the number of FTEs increased by 15 from 84 to 99 between 1990 and 2000. Both the increase in FTEs and average salary and benefits led to an increase in staffing costs, which have noticeably outpaced the ONPS Base budget increases. Between 1990 and 2000, the inflation- adjusted ONPS Base budget increase was $551,638. Compare this to the inflation- adjusted increase in salaries and benefits expense of $926,250.

Inflation- adjusted staffing cost increases exceeded the inflation- adjusted ONPS Base budget increases by $374,612, or 67.9%.

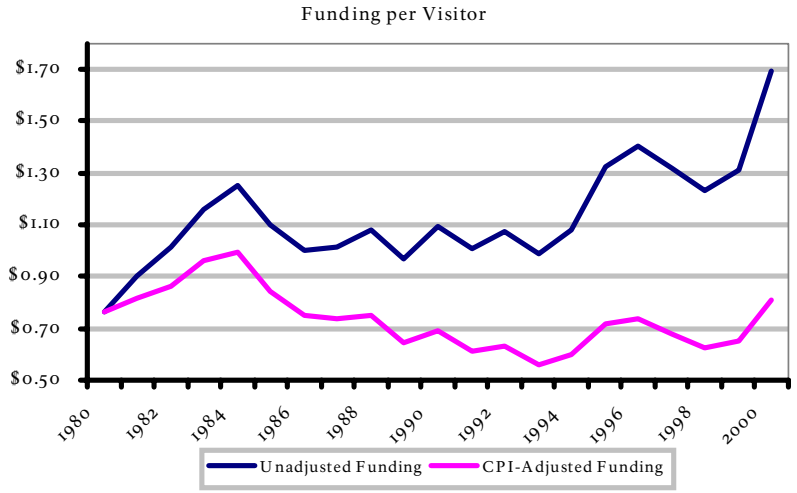
B. Chambers

Staffing Cost Increases vs. ONPS Base Funding Increases (1990 - 2000)

	Unadjusted for Inflation	Adjusted for Inflation *
Salary and Benefits Increase Using 1990 Staffing Level (84 FTEs)	$ 1,313,967	$ 427,976
Salary and Benefits Increase From additional staff hired between 1990 and 2000 (15 FTEs)	$ 656,487	$ 498,274
Sum of Salary and Benefits Increase	**$ 1,970,454**	**$ 926,250**
ONPS Base Funding 1990	$ 2,854,000	$ 2,854,000
ONPS Base Funding 2000	$ 4,487,000	$ 3,405,638
ONPS Base Increase	**$ 1,633,000**	**$ 551,638**
Base Deficiency for Salary and Benefits	**$ 337,454**	**$ 374,612**

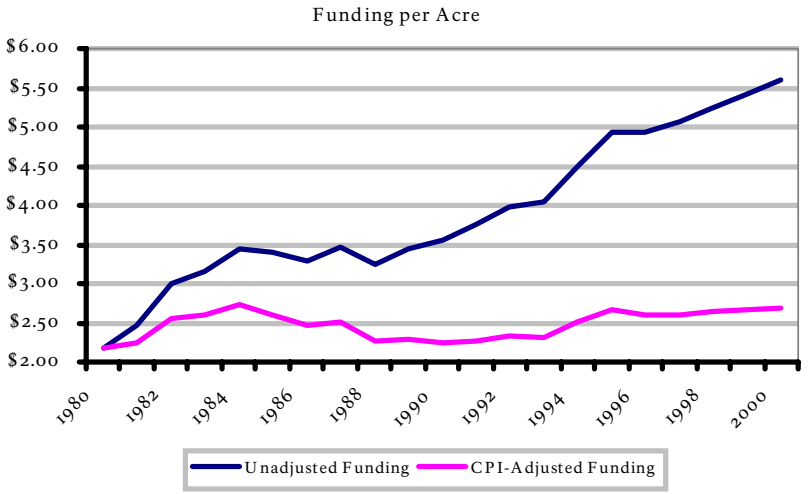
** Inflation-adjusted numbers use 1990 as a base year.*

Marginal Analysis



Funding Per Visitor (1980- 2000)

Between 1980 and 2000, unadjusted funding per visitor increased 94¢ from $0.76 to $1.70. However, CPI- adjusted funding per visitor **only** increased 5¢, from $0.76 in 1980 to $0.81 in 2000— which is still far below the 1984 level of $1.00.



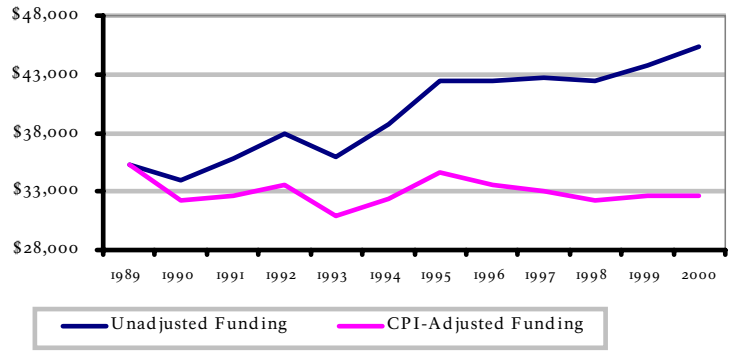
Funding Per Acre (1980- 2000) *

Between 1980 and 2000, unadjusted funding per acre increased $3.42 from $2.18 to $5.60. However, CPI- adjusted funding per acre **only** increased 50¢ from $2.18 to $2.68.

** Please note that Big Bend acquired 67,125 acres from the Harte Ranch in September 1987.*

Marginal Analysis

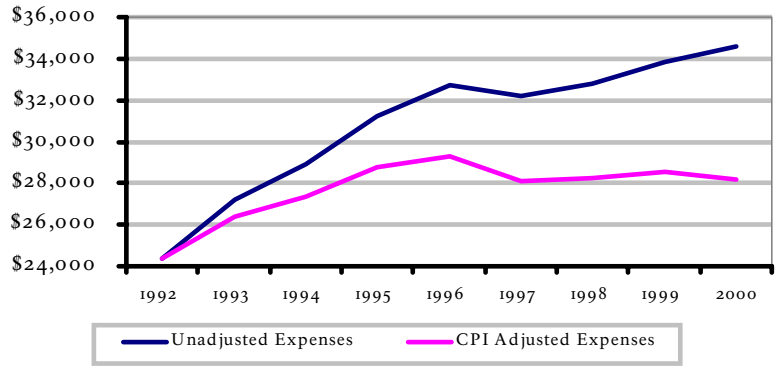
Funding per Employee



Funding Per Employee (1989- 2000) *

Between 1989 and 2000, the total number of permanent full-time employees increased by 21 persons from 78 to 99. Unadjusted ONPS Base funding per employee for the same period increased $10,018, whereas CPI- adjusted funding per employee **decreased** $2,668. The park is actually receiving fewer ONPS Base funds per employee than it did in 1989.

Average Salary per Employee



Average Salary Per Employee (1992- 2000) *

Between 1992 and 2000, the park's average unadjusted salary per employee increased $10,258. Average CPI- adjusted salary per employee using 1992 as a base year increased $3,848, but has been on a **stagnant trend** since 1995. To put it simply, Big Bend employees have not received an increase in their inflation-adjusted salary since 1995.

** Please note that employee data was unavailable for 1995, 1997 and 1999. An average of the preceding and following year employee data was used for the missing years.*

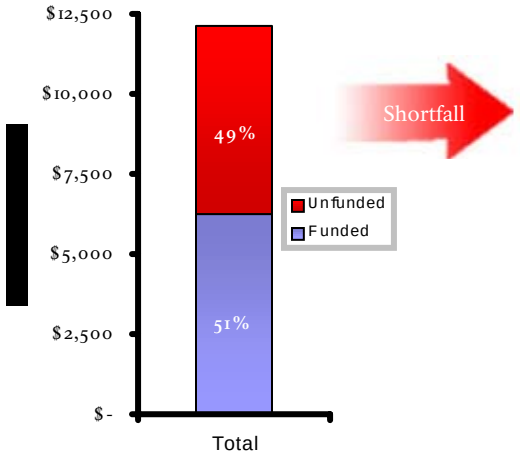
Summary of Functional Areas

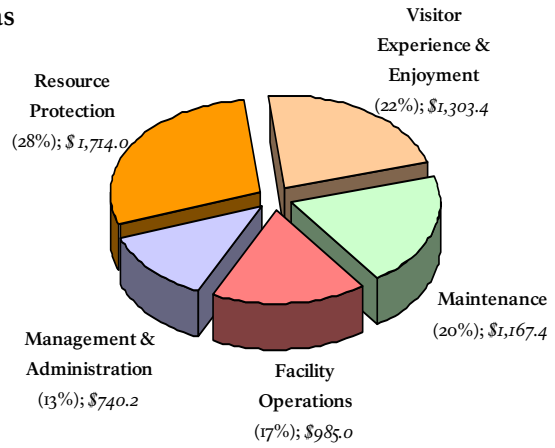
Operational Priorities: A Parkwide Overview

Big Bend National Park has many unmet operational needs. The park is approximately 49% underfunded. Parkwide operations are heavily impacted by the presence of labor and non- labor shortfalls. These shortfalls prevent Big Bend from meeting operational standards in each functional area. According to staff members and division chiefs, 29% of Big Bend's operational standards in FY2000 were never met. The chart below provides an overview of the operational needs at Big Bend. The top six prioritized operational needs total $1,630,000. (Table 1)

The largest unmet need at Big Bend is in Resource Protection and is primarily due to the size of the park and the volume of natural and cultural resources that still require research, documentation and protection. Big Bend contains significant archaeological, natural, historical, and cultural resources that have yet to be researched and documented. For example, only three percent of the park's documented archaeological sites have been adequately surveyed. Discovery, documentation, and preservation of natural and cultural resources are essential to maintain the park's intrinsic asset value for future generations.

Unfunded Operational Needs by Functional Areas





Summary of Functional Areas

The next largest need is in Visitor Experience and Enjoyment and reflects the operational needs of a large park in terms of this functional area's dual purpose of protecting the resources and providing visitor education. At Big Bend, funds are needed to bring the protection division up to a level of staffing that can meet patrol and visitor safety standards and to increase the interpretation division's staffing to a level that can meet visitor needs consistently. The proximity to the Mexican border and the associated border issues, such as illegal immigration and smuggling, significantly add to Big Bend's need for increased visitor and resource protection.

There are also significant needs within the Maintenance and Facility Operations program areas. These two areas overlap in terms of labor and non- labor expenses and when pooled, account for 36% of the park's needs. The aging infrastructure at Big Bend and the National Park Service's historical focus on funding maintenance projects and new facilities rather than the repair of existing facilities has created significant and costly needs in these functional areas.

The needs in Management and Administration reflect the expansion in scope and function beyond those traditionally represented. Today's reliance on external affairs and partnership programs for support has resulted in an increased need for additional support to oversee operations at Big Bend. Also, the Servicewide focus on accident prevention and safety has created the need for a safety officer to oversee the implementation of a comprehensive parkwide program. Greater funding in this area will help enhance management coordination and oversight, and contribute to more efficient park operations.

Without additional operational base funding for each functional area, the vast resources of Big Bend will continue to lack the attention that is required and the aging infrastructure will continue to deteriorate and require emergency maintenance on an unscheduled basis. Operating in such a manner is inefficient and more costly than providing adequate funding every year. The next ten pages explore the funding and personnel shortfalls of each functional area in greater detail.

Table 1: Top 7 Operational Funding Priorities at Big Bend National Park

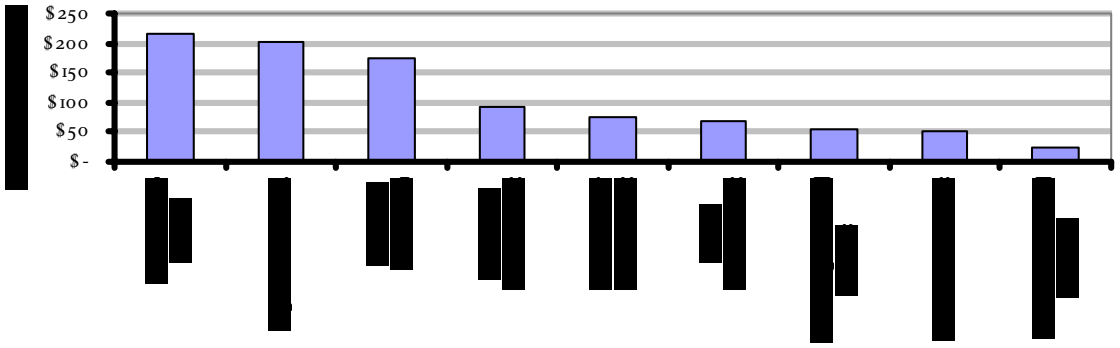
Functional Area	Project Description	Annual Cost
Facilities Maintenance	Improving Preventative Maintenance Capabilities	$ 336,000
Management and Administration	Improving Management Capabilities and External Partnering	$ 120,000
Resource Protection	Protection Funding for Harte Ranch Addition	$ 326,000
Resource Protection	Protection Funding for Diverse Ecosystems	$ 100,000
Resource Protection	Protection Funding for Threatened and Endangered Species	$ 160,000
Visitor Experience and Enjoyment	Increasing Border Law Enforcement Capabilities	$ 296,000
Visitor Experience and Enjoyment	Strengthening Encumbered Interpretive Visitor Services	$ 292,000
	Total Annual Cost	**$1,630,000**

Resource Protection

The staff of this functional area administers Big Bend's science program, including the curatorial collections, a research library, all natural resource programs such as wildlife management, vegetation management, air and water quality monitoring, all cultural resource programs such as historic preservation and archaeological surveys and finally the Geographic Information System. Law enforcement patrols and wildland fire programs to protect the natural and cultural resources of the park also fall under this functional area.

Big Bend contains the largest protected area of Chihuahuan Desert vegetation and wildlife in the United States, and researchers and scientists here at Big Bend are working hard to foster self- sustaining functional ecosystems. Without proper research and monitoring, the Chisos hedgehog cactus, the Mariposa cactus, the Mexican black bear, the Mexican long- nosed bat and many more vegetative and wildlife species specific only to this area in the United States will be destroyed by poachers, visitors, exotic and invasive plants and urban areas whose pollution reaches Big Bend from more than 500 miles away.

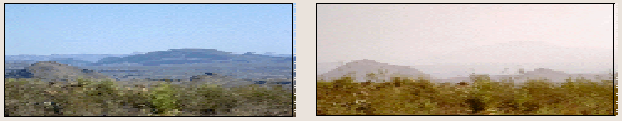
FY2000 Expenditures



Big Bend in the Spotlight: Air Quality

In spite of Big Bend's remote location and presumed immunity to such urban problems as air pollution, noticeable changes in the park's air quality appeared during the 1970s. After years of data collection and analysis since 1978, researchers are now able to interpret the transport and transformation of pollutants that contribute to the park's reduced visibility. North Central Mexico, East- Central Texas, the Ohio River valley and Mexico City are some of the major sources that contribute to Big Bend's visibility pollution.

Air quality in this area varies significantly by season, with the summer season typically having the poorest visibility and winter season the best.



These pictures show the same view under good and bad air quality conditions.

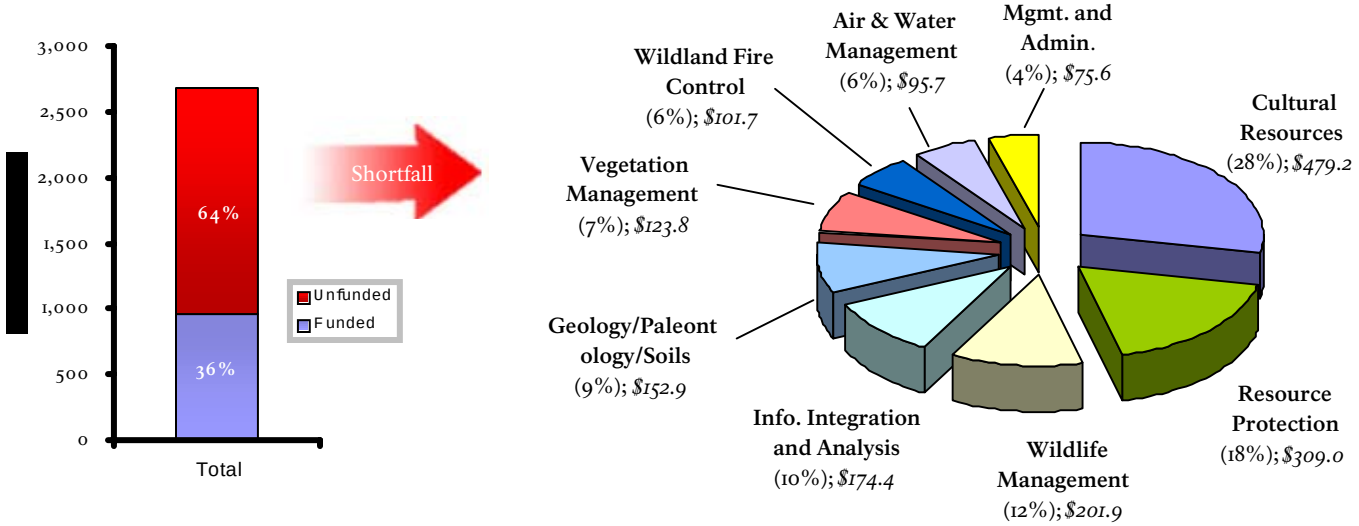
On some days of the year Big Bend's air quality is so good that visitors can actually see the detail of large objects more than 100 miles away. Generally however, park visitors find moderately hazy views on most days, with poor conditions of less than 30 miles visibility. On a few days of the year Big Bend experiences the worst air quality, in terms of visibility impairment, within any western national park.

To adequately fund the air quality management program, Big Bend requires an additional 0.93 FTE's and $44,924.

Resource Protection

This functional area has the greatest dollar shortfall of any functional area at Big Bend. In FY2000, Resource Protection spent $958,781 and had 16.0 FTEs available. It identified a shortfall of $1,714,038 and 26.7 FTEs – 13.8 permanent positions and 12.9 seasonal and term positions to eliminate the existing backlog. Resource protection is often overlooked because when *things are falling apart* in this area, they are not readily apparent to visitors or outsiders and hence escape the public eye until something troubling occurs. Visitors do not realize that antiquated infrastructure and understaffing in the geographical information systems area tends to prolong projects eight to ten times the length they should be. Visitors do not realize that Big Bend is bigger than Rhode Island and only three percent of the park has been adequately surveyed for archaeological and cultural resource purposes. Visitors do not realize that the invasive tamarisk (i.e. salt cedar) vegetation is indirectly destroying the native vegetation at an alarming rate. Visitors do not realize that poaching and trespassed livestock are not thwarted due to a lack in funds and personnel to conduct regular backcountry patrols. Surveying, researching, monitoring and patrolling a park this size requires time, additional staff and consequently more dollars. And isn't the mission of a national park ultimately to preserve the natural and cultural resources contained within the park's boundaries?

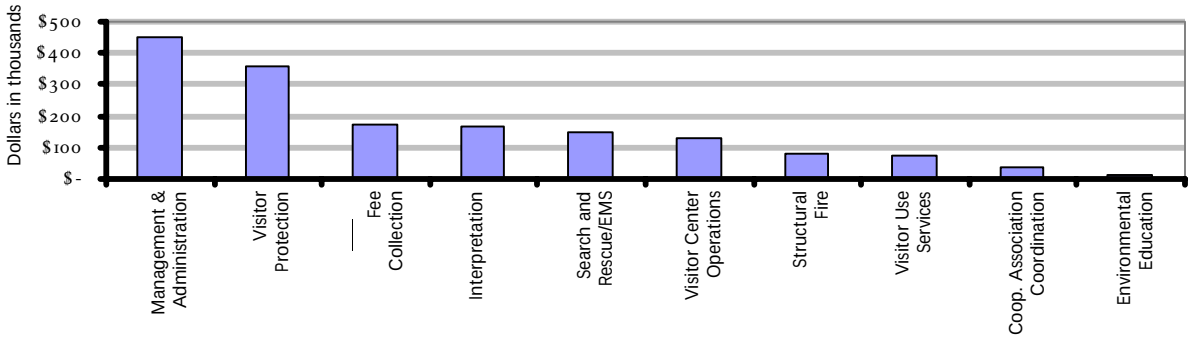
Unfunded Operational Needs for Resource Protection



Visitor Experience and Enjoyment

The staff of this functional area interprets Big Bend National Park's natural and cultural resources to the public. The staff produces interpretive planning documents such as visitor center exhibit plans, wayside exhibit plans and interpretive prospectuses. In addition, the staff manages and coordinates the park library, fee collection operations, environmental education programs, the park's website, interpretive programs, the operation of four visitor centers, the Volunteers-in-Parks and Student Conservation Association and the cooperating association and friends group activities. This functional area also includes the safety of visitors and residents by means of emergency medical services, structural fire programs, search and rescue operations, and land, river and air law enforcement patrols.

FY2000 Expenditures



Big Bend in the Spotlight: The Border

Unlike most other national parks, Big Bend National Park is a "Federal island" of exclusive legislative jurisdiction, and unlike the majority of other parks, Big Bend has to deal with U.S.-Mexico border issues. Being so remote, the park has to rely on its own resources to survive. The remote aspect makes it appealing not only to tourists and visitors, but also to a criminal element that finds moving between the U.S. and Mexico and carrying on criminal activity relatively easy. Although the duties of the visitor and resource protection division at Big Bend do not focus primarily on the monitoring and prevention of border violations, the reality of the situation is that there are limited resources at Big Bend and border violations do spill over into visitor and resource protection violations.

The southern boundary of Big Bend includes three historic international crossings located at Boquillas, San Vicente, and Santa Elena. In the early 1990s, changes to U.S. Customs and Immigration laws required persons entering the U.S. to do so through an official port of entry. The historical use of these crossings continues with park visitors crossing into Mexico to visit the villages, residents from the villages crossing into the park to shop at the stores and relatives living in the U.S. crossing into Mexico to visit their families. The park's protection staff is confronted daily with border issues in their effort to monitor the historical use of these crossings.

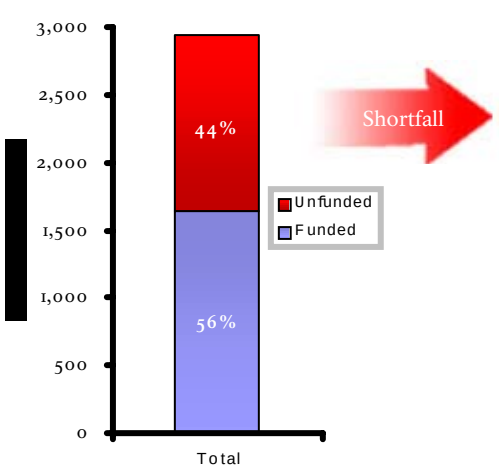
Increased enforcement efforts along the entire U.S.-Mexico border force smuggled contraband and undocumented aliens to less protected areas of the border. As a result, the already limited law enforcement resources at Big Bend are now dealing with an increased number of drug and border violations. Additional assistance from other federal agencies focusing on border issues would greatly enhance the protection efforts of the park staff.

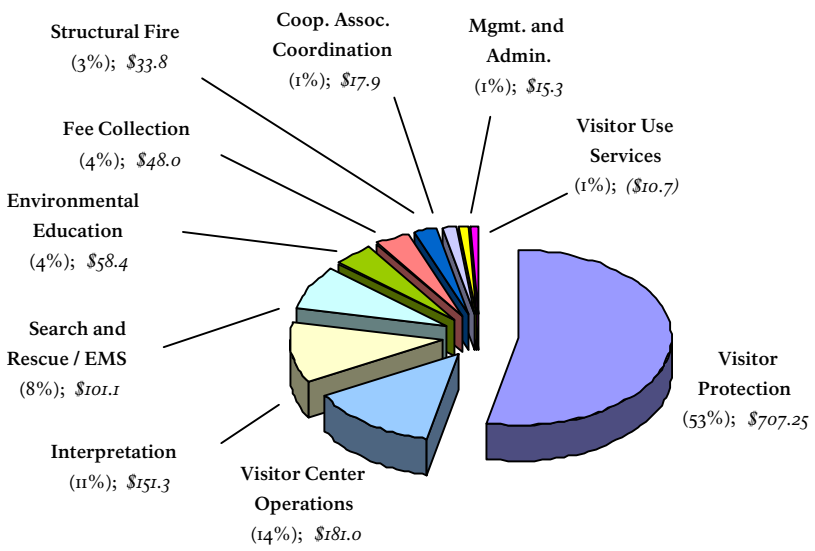
Visitor Experience and Enjoyment

Helicopter lifting off for a search and rescue mission.

Next to Resource Protection, this functional area has the second greatest dollar shortfall of any functional area in the park. In FY2000, Visitor Experience and Enjoyment spent $1,636,626 and had 25.5 FTEs available. The identified shortfall was $ 1,303,366 and 18.3 FTEs – 15.1 permanent positions and 3.2 seasonal and term positions to assist during the park's peak season. A closer look reveals that volunteers at Big Bend are performing many of the basic functions that nonexistent staff members should be doing. Although the outlying visitor centers appear to be staffed most of the time, visitors and outsiders do not necessarily realize that volunteers are performing most of the work. Volunteers should not be a replacement for interpretive rangers. Furthermore, the law enforcement side of the program requires additional resources. Big Bend contains 801,163 acres and 118 miles of international boundary with Mexico. The Rio Grande Wild and Scenic River administered by Big Bend shares an additional 127 miles of international boundary. In total, Big Bend National Park manages 245 miles or 13% of the entire U.S.- Mexican border. Visitor and resident safety in this harsh and unforgiving terrain requires continuous patrolling of front country roads and backcountry roads and trails to prevent illegal activities or visitor mishaps from ultimately costing human lives. Unfortunately, such tragic incidents have happened in the past and Big Bend has now laid out operational standards in this Business Plan, which are meant to minimize such catastrophic occurrences in the future.

Unfunded Operational Needs for Visitor Experience and Enjoyment



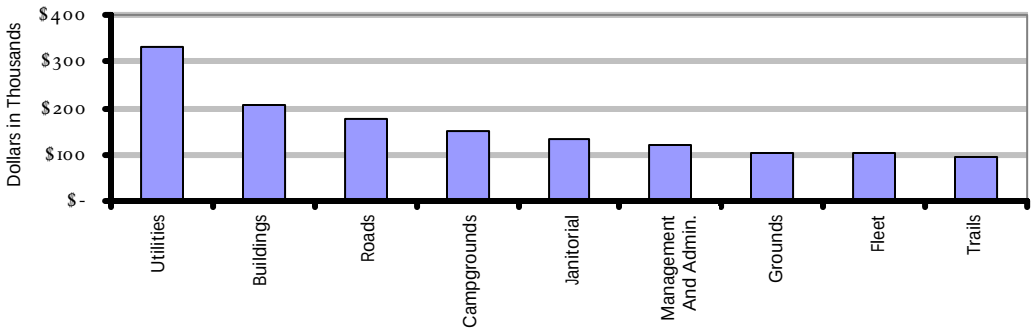


Facility Operations

Facility Operations involves all those activities that must be undertaken on a regular basis to ensure smooth operation of park facilities. The business plan separates Facility Operations into nine distinct programs that include all of the regularly scheduled duties that the park performs on its assets and resources so that they can be safely interpreted, accessed, and utilized by visitors and park personnel.

Big Bend's Facility Operations are responsible for 142 buildings for public, administrative, concession, and housing purposes, 123 miles of paved roads, 207 miles of unpaved roads, 201 miles of unpaved trails and walks, and 335 campsites. Big Bend is also responsible for 69 buildings listed on the National Register of Historic Places, of which 28 are considered to be in poor condition and difficult to keep in proper working order. Once constructed or rebuilt, routine operational attention is necessary to prevent an item from falling into a state of disrepair that requires extensive and costly rehabilitation.

FY2000 Expenditures



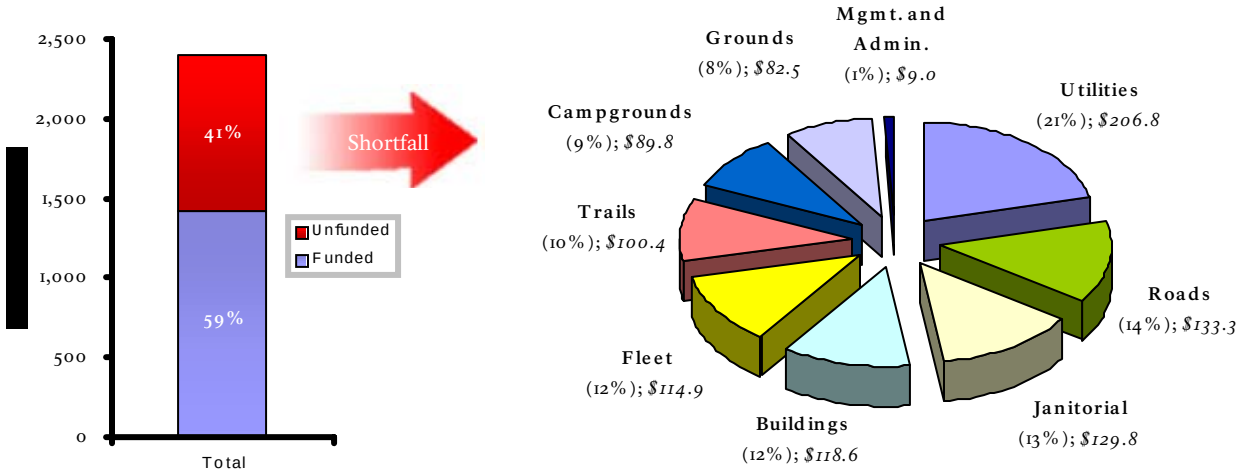
Big Bend in the Spotlight: Parkwide Recycling Program

Big Bend currently operates an extensive parkwide recycling program that consists of a central recycling center and five collection areas throughout the park. The recycling program was started to minimize the dollar costs and environmental impacts associated with the transport to and use of a landfill. The program also has become a Servicewide model and serves to remind visitors of the importance of recycling. From 1997 to 2001, Big Bend transported 212 tons of material outside of the park to be recycled. At this time, the program requires the involvement of personnel from other functional areas because the park has not received a base increase to adequately fund this program. Adequately funding this program would require 0.90 FTE and $25,464. The current funding shortfall in recycling highlights the very important issue of resource allocation due to funding shortfalls. When an activity requires the use of personnel from other areas, it decreases the park's ability to operate adequately and maintain important resources.

Facility Operations

In FY2000, Facility Operations spent $1,413,980 and had 25.1 FTEs available. The identified shortfall was $984,984 and 6.4 FTEs. Much of the shortfall arises from the park's inability to adequately undertake operational requirements. The size of Big Bend's inventory can be compared to that of a small city and ensuring excellent operation of park facilities for visitor use is just as complex and costly.

Unfunded Operational Needs for Facility Operations

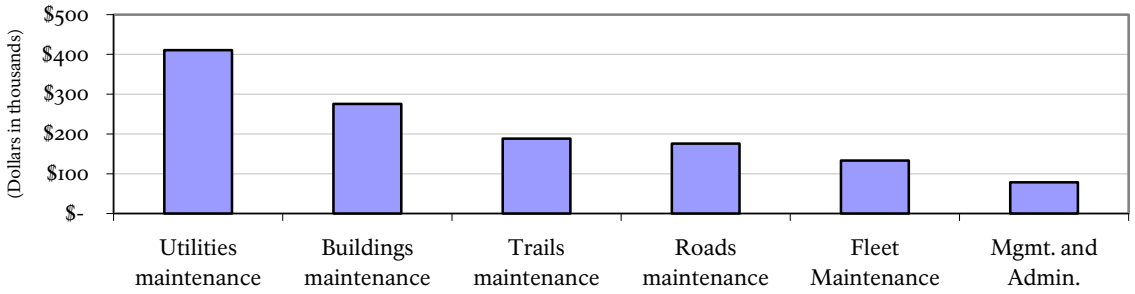


Facility Maintenance

Maintenance involves all the work performed to prolong the useful life of park assets and resources. Unlike Facility Operations, maintenance activities do not recur on a daily or weekly basis. Activities in this functional area are divided into six programs that include the installation, construction, or repair of major assets and resources as well as significant jobs for those assets such as re- roofing a building, resurfacing a road, or painting the exterior of a building. Maintenance activities ensure the protection of park resources and visitors.

Due to an historical Servicewide lack of funding for operational upkeep, the aging inventory of assets at Big Bend requires more and more maintenance work to ensure the assets are functional. Most of the housing, visitor center, and campground facilities were built during the National Park Service's Mission 66 construction program from 1955 to 1966. Increases in visitation have also placed stress on aging sewage and water treatment facilities that will require a large amount of funding to finance a complete renovation.

FY2000 Expenditures



Big Bend in the Spotlight: Trails Maintenance

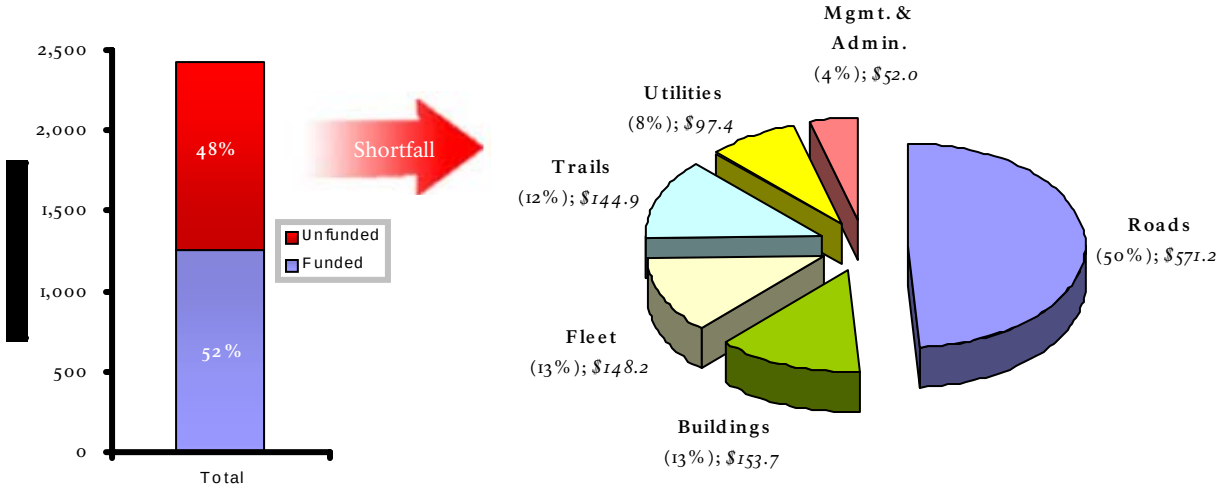
Big Bend National Park maintains more than 200 miles of trails and walks in locations ranging from the desert floor to the Chisos Mountains. Trails are often the most used and under appreciated aspect of the National Park System. Comments are often heard only about trails in need of work and not about those that are in excellent condition. Since 1990, Big Bend has been committing time and resources to develop a trails program that can fix over two decades of neglect due to funding shortfalls. Years of erosion and impact due to social trails, cut switchbacks, and horse concessions along with today's increased use has created a need for recurring maintenance projects to ensure visitor satisfaction and safety while on the trails. An additional 2.27 seasonal FTEs and $144,859 would allow the park to construct and reconstruct trails that would last for generations. To preserve the wilderness designation of the Chisos Basin, Big Bend's trails program utilizes hand tools and physical labor to complete projects. This increases the labor necessary to complete projects but ensures that visitors are able to enjoy the solitude of the outdoors while maintenance projects are occurring.

Facility Maintenance

Maintenance on existing structures and completion of new projects also faces the daunting task of meeting numerous regulations and mandates that increase the labor and non- labor cost of projects. Currently, Big Bend has $15.97 million in line- item construction projects that have yet to be fully funded or even started. This backlog was created by over forty years of minimal scheduled maintenance due to funding shortfalls.

In FY2000, Facility Maintenance spent $1,262,112 and had 14.8 FTEs available. The identified shortfall was $1,167,392 and 6.7 FTEs— 4.4 permanent positions and 2.3 seasonal positions.

Unfunded Operational Needs for Facility Maintenance



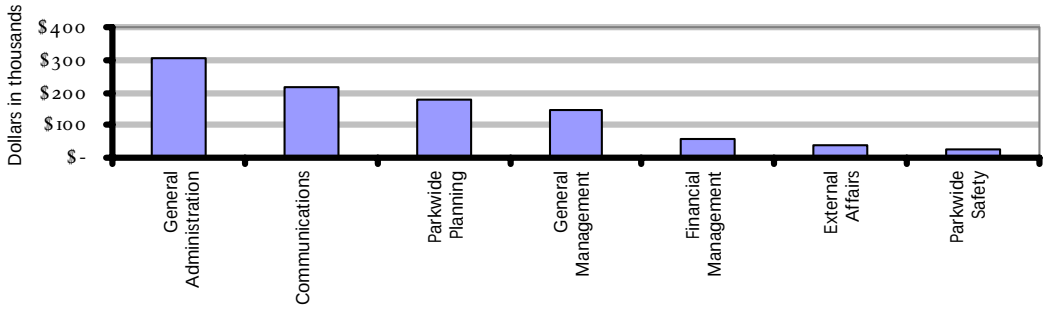
Management and Administration

Management and administration at Big Bend National Park is a complex function that is not only responsible for accomplishing the daily administrative functions associated with most national parks, but also for working on U.S. – Mexico affairs that if left unattended would affect the ability of the park to accomplish the goals set forth in its mission statement. Border issues, air and water quality, and natural and cultural resource management and protection require extensive time and travel to ensure that they receive enough attention.

External Affairs

As the amount of funding required to maintain the park's operations increases and allocated base funds remain relatively flat, more time has to be expended on the pursuit of outside funds. Currently, the absence of an Assistant Superintendent and other support staff makes significant involvement with outside organizations difficult. Additional personnel would bring the external affairs program up to its full potential as a development engine and cultivator of alternative funding.

FY2000 Expenditures



Big Bend in the Spotlight: Parkwide Safety

At Big Bend National Park, personnel and resource shortfalls have created the need to employ shared responsibility or collateral duties to oversee the occupational safety of the various parkwide programs for employees. Unfortunately, this level of oversight is not sufficient to provide for the production and review of comprehensive safety plans, monitoring of the workplace, or adequate and appropriate enforcement when safety rules are violated. At Big Bend, many of the job related injuries that contributed to the $106,914 in FY2000 Office of Worker's Compensation costs most likely could have been prevented if a safety officer had been hired. The lost time and medical costs saved through the prevention of accidents and workplace injuries would offset the additional costs associated with having a dedicated parkwide safety officer to manage the program. Big Bend is working to improve its safety record, as is the National Park Service, and needs adequate funding to better support such efforts.

Management and Administration

Communications

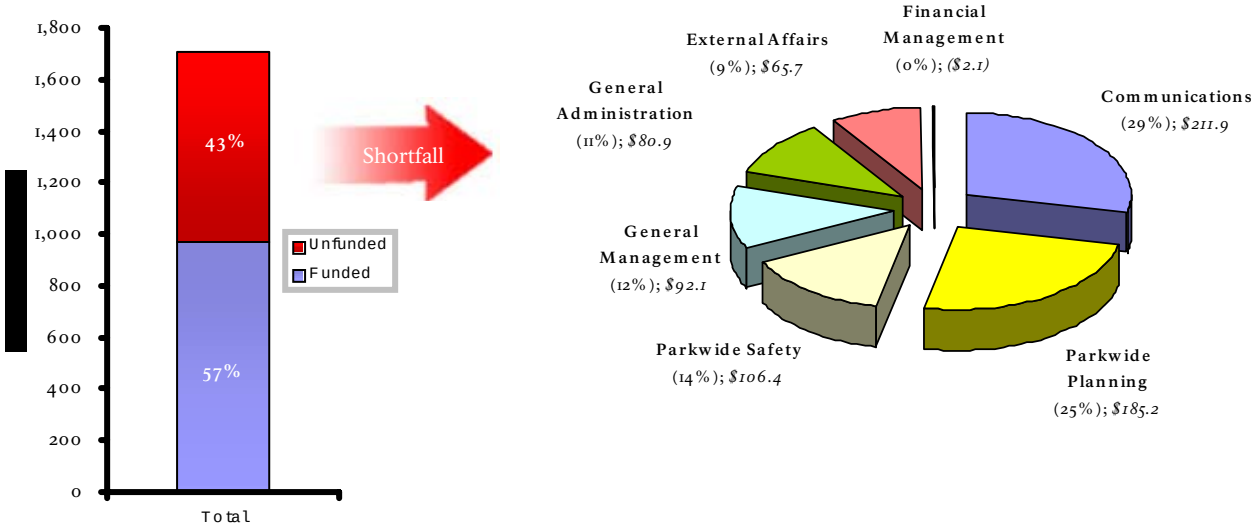
Due to recent mandates and program introductions by the Department of the Interior and the National Park Service, Big Bend has become increasingly reliant on technology to complete its regular operations. Like many other parks, Big Bend uses many different systems to conduct park business. Each of these systems requires Internet connectivity and as a result the park's need for bandwidth and technology is growing. Unfortunately, the need is not being met. Along with computers that are not even close to being in step with today's level of technology, it is common to find that accessibility to web- based services is very, very slow. Needs must be met to gain the efficiencies provided by improved technology.

Additional Activities

In addition to these specific activities, the Management and Administration function accounts for other parkwide endeavors such as financial management, general administration including human resources, contracting, housing and property management, concessions management, and parkwide safety. General management and planning are also included in this category and require the talents of experienced senior managers and their staffs. It is important to note that Big Bend provides human resource support to Amistad National Recreation Area and is involved in supporting and implementing many NPS initiatives. The charts preceding and below outline the funded and unfunded needs of this functional area.

In FY2000, Management and Administration spent $967,156 and had 16.0 FTEs available. The identified shortfall was $740,169 and 8.9 FTEs.

Unfunded Operational Needs for Management and Administration



Rio Grande Wild and Scenic River (RIGR)

In 1978, Congress designated a 196- mile portion of the Rio Grande from the Chihuahua/Coahuila state line in Mexico to the Terrell/Val Verde county line in Texas as part of the National Wild and Scenic Rivers System. The upper 69- mile section of this 196- mile corridor lies within Big Bend National Park. The Wild and Scenic Rivers Act of 1968 directs that designated rivers "...be preserved in free- flowing condition, and that they and their immediate environments be protected for the benefit and enjoyment of the present and future generations." Big Bend National Park administers this 196- mile section as the Rio Grande Wild and Scenic River. The Rio Grande Wild and Scenic River is part of a valuable ecological system that represents the major riparian and aquatic habitat associated with the Chihuahuan Desert. Its isolation has created an outpost for rapidly dwindling and irreplaceable natural resources.

RIGR is funded separately from Big Bend National Park, but has been managed by Big Bend since its establishment. As water quality and law enforcement issues begin developing downstream outside the park boundaries, RIGR will require more and more funding, as this section will show.

...an outpost for rapidly dwindling and irreplaceable natural resources.

Funding and Expenses

RIGR's total FY2000 funds were $184,809. All of the funding was ONPS Base appropriated.

Expenditures in FY2000 totaled $182,746, with roughly 88% going towards salaries and benefits. The remaining $1,936 was not carried over into FY2001.

The pie chart below on the left depicts where FY2000 expenses were spent. The bar graph on the right explains the historical trends of RIGR's expenses between 1998 and 2000. In FY1999, RIGR spent more money on materials and supplies, such as canoes and other river patrolling equipment.

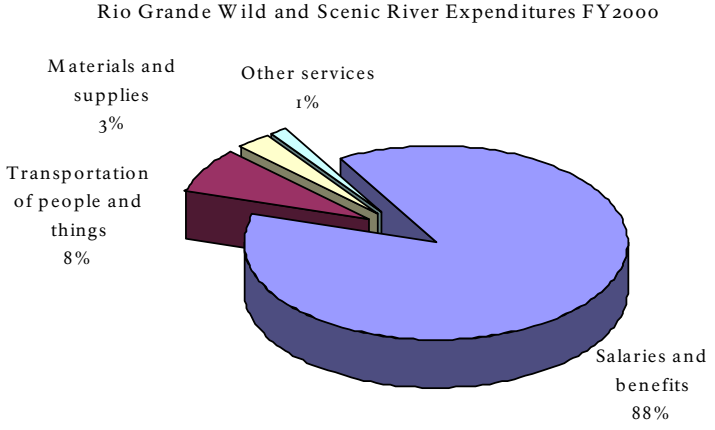
Testing water in the Rio Grande

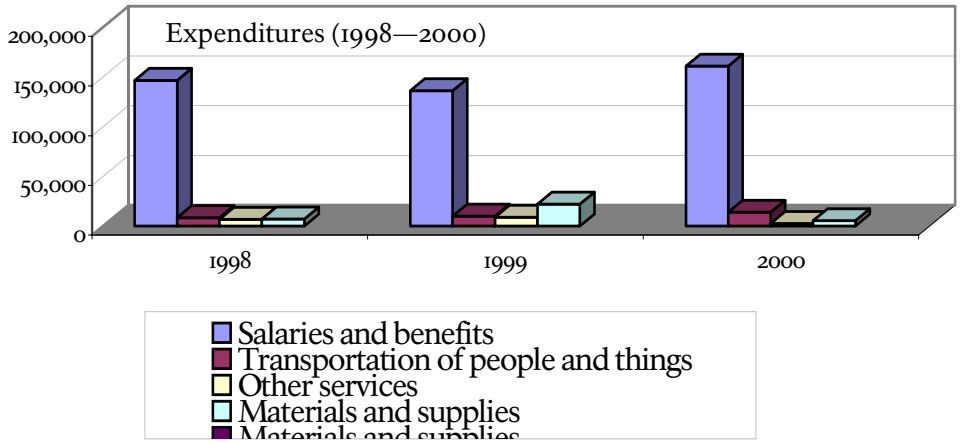
Big Bend in the Spotlight:
Water Quality and Quantity

Rio Grande aquatic life and recreational use is threatened by diminished stream flows and degraded water quality. The water of the Rio Grande in the Big Bend region originates both from the Rocky Mountains in Colorado and New Mexico and from the Rio Conchos which flows from the Sierra Madre of Western Chihuahua, Mexico. These two rivers join about 60 miles upstream from Big Bend National Park. Big Bend manages 245 miles of the 1,000- mile international boundary formed by the Rio Grande.

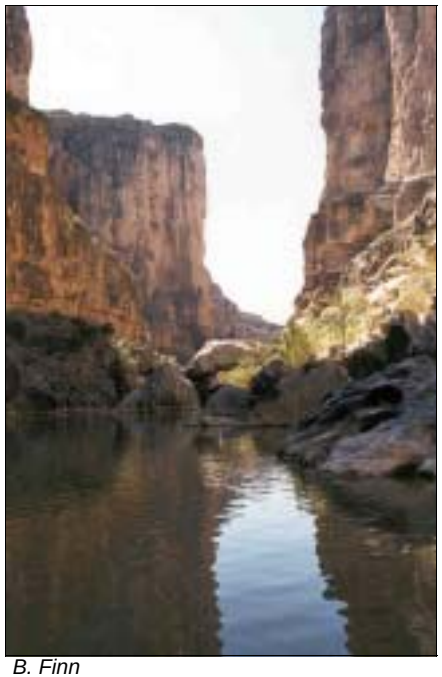
The high flows necessary to maintain river channels have been severely decreased as a result of dams; flows and irrigation in the Rio Grande below El Paso have been reduced by 75%, and by 50% on the Rio Conchos. The reduction of flood flows in the Rio Grande below Fort Quitman prevents the river from moving the sediment deposited by tributary desert washes, resulting in a long reach of the river with no defined river channel. This reach of the river has turned into a continuous tamarisk forest (an exotic species), which ponds the river below Fort Quitman, further reducing the water that reaches Big Bend by more than 50%. Very little water flows past Ft. Quitman, and what does is highly saline, with particularly high concentrations of chloride and sulfate. Since 1993, flows from the Rio Conchos have been further diminished by both drought and increased upstream water use. As a result, water quality has declined severely due to the much higher salinity and contaminants in the Rio Grande as compared to the Rio Conchos.

To adequately fund the Water Resource Management program, Big Bend requires an additional 1.26 FTE's and $79,263.

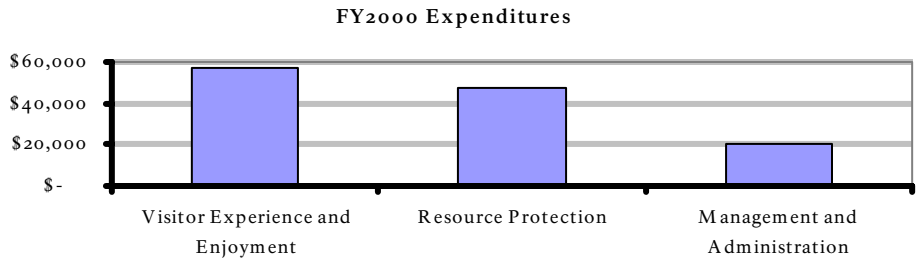




Functional Areas



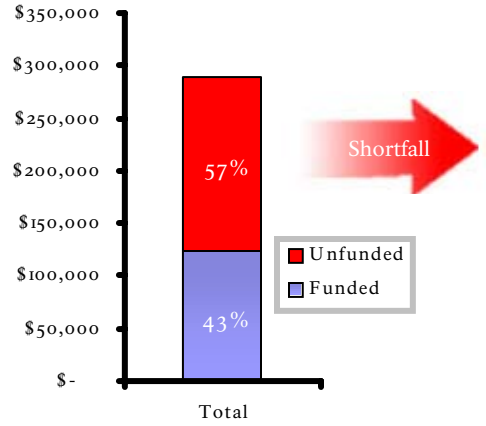
B. Finn

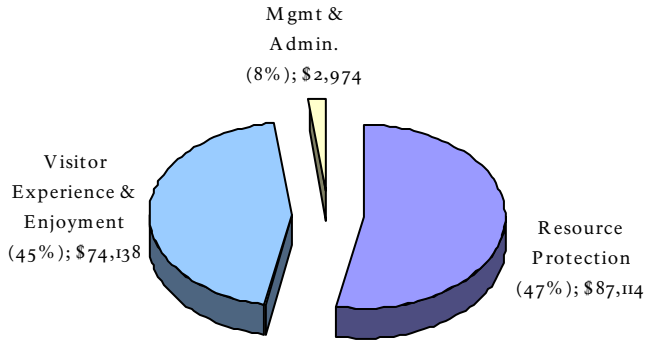


RIGR is approximately 44% underfunded. The Wild and Scenic River is in desperate need of advanced equipment such as water testing equipment for the hydrologist and satellite radios that will allow River Rangers to communicate with the communications center when conducting visitor safety and resource protection patrols through the deep canyons of the Rio Grande. Additionally, as the Rio Grande's water level continues to decrease, patrolling the 196- mile stretch of river for visitor and resource safety will require the use of hovercrafts instead of canoes. This will not only allow rangers to respond more quickly, but it will also allow for a greater number of patrols (i.e. the time spent on one patrol will decrease, which will allow rangers to go out on the river and patrol the full stretch more often).

RIGR's operational priorities lie in hiring more River Rangers to patrol the Rio Grande for resource protection and visitor safety purposes. In addition, the park hydrologist needs additional staff to assist in monitoring and conducting research on the river to help prevent the further deterioration in the already polluted water.

Unfunded Operational Needs for RIGR





Financial Analysis

Summary Financial Statement

Big Bend National Park

Functional Area	AVAILABLE FTE	ONPS Base	Project	Reimbursable	Revenue	Total	Detailed FTE Shortfall Breakout: Non-Perm	Perm	SHORTFALL / (SURPLUS) FTE	Labor $	Non-Labor $	Total $	REQUIRED FTE	Total $
Resource Protection														
Cultural Resources	0.78	$ 42,684	$ 8,025	$ -	$ -	$ 50,708	5.75	3.02	8.77	$ 463,808	$ 15,380	$ 479,188	9.55	$ 529,896
Resource Protection	2.34	$ 166,075	$ 298	$ 4,356	$ 3,782	$ 174,511	0.61	3.29	3.90	$ 244,043	$ 64,920	$ 308,963	6.24	$ 483,474
Wildlife Management	1.34	$ 59,953	$ -	$ -	$ 8,693	$ 68,646	1.92	1.49	3.41	$ 168,968	$ 32,900	$ 201,868	4.75	$ 270,513
Info. Integration and Analysis	1.27	$ 43,969	$ 10,361	$ -	$ -	$ 54,330	1.78	0.73	2.51	$ 121,152	$ 53,200	$ 174,352	3.78	$ 228,682
Geology/Paleontology/Soils	0.43	$ 22,363	$ -	$ -	$ -	$ 22,363	0.62	1.56	2.18	$ 120,293	$ 32,600	$ 152,893	2.61	$ 175,257
Vegetation Management	1.77	$ 37,142	$ 49,679	$ -	$ 6,763	$ 93,584	1.31	0.65	1.96	$ 94,195	$ 29,600	$ 123,795	3.73	$ 217,380
Wildland Fire Control	3.94	$ 28,780	$ 185,168	$ 949	$ 841	$ 215,737	0.00	1.13	1.13	$ 89,714	$ 12,000	$ 101,714	5.07	$ 317,451
Air and Water Management	1.35	$ 51,891	$ 12,977	$ 10,913	$ -	$ 75,780	0.34	1.30	1.64	$ 68,092	$ 27,600	$ 95,692	2.99	$ 171,472
Mgmt. and Admin.	2.79	$ 167,079	$ 467	$ 574	$ 35,000	$ 203,120	0.56	0.60	1.16	$ 59,623	$ 15,950	$ 75,573	3.95	$ 278,693
	16.01	$ 619,936	$ 266,975	$ 16,792	$ 55,079	$ 958,781	12.89	13.77	26.66	$ 1,429,888	$ 284,150	$ 1,714,038	42.67	$ 2,672,819
Visitor Experience and Enjoyment														
Visitor Protection	4.45	$ 307,753	$ 34,580	$ 7,064	$ 6,296	$ 355,692	0.64	9.31	9.95	$ 594,845	$ 112,400	$ 707,245	14.40	$ 1,062,937
Visitor Center Operations	2.92	$ 93,506	$ -	$ -	$ 37,302	$ 130,808	1.75	2.89	4.64	$ 180,998	$ -	$ 180,998	7.56	$ 311,806
Interpretation	2.86	$ 147,754	$ -	$ 41	$ 18,851	$ 166,646	0.46	0.66	1.12	$ 62,419	$ 88,889	$ 151,308	3.98	$ 317,954
Search and Rescue / EMS	1.85	$ 135,440	$ 5,930	$ 3,368	$ 4,209	$ 148,947	0.41	0.76	1.17	$ 65,066	$ 36,000	$ 101,066	3.02	$ 250,014
Environmental Education	0.40	$ 10,245	$ 3,121	$ -	$ 1,511	$ 14,876	0.00	0.96	0.96	$ 56,942	$ 1,500	$ 58,441	1.36	$ 73,318
Fee Collection	4.51	$ 79,339	$ -	$ 203	$ 95,871	$ 175,413	0.00	0.89	0.89	$ 30,577	$ 17,448	$ 48,025	5.40	$ 223,438
Structural Fire	1.01	$ 77,959	$ 1,986	$ 1,504	$ 1,552	$ 83,001	0.00	0.52	0.52	$ 33,791	$ -	$ 33,791	1.53	$ 116,792
Coop. Assoc. Coordination	0.69	$ 33,018	$ -	$ 365	$ 5,229	$ 38,612	0.00	(0.14)	(0.14)	$ 13,688	$ 4,200	$ 17,888	0.55	$ 56,500
Mgmt. and Admin.	5.70	$ 304,364	$ 97,434	$ 18,932	$ 27,157	$ 447,887	0.00	(0.64)	(0.64)	$ (31,450)	$ 46,768	$ 15,318	5.06	$ 463,205
Visitor Use Services	1.09	$ 53,848	$ 7,803	$ 1,707	$ 11,386	$ 74,744	0.00	(0.14)	(0.14)	$ (10,715)	$ -	$ (10,715)	0.95	$ 64,029
	25.48	$ 1,243,226	$ 150,855	$ 33,182	$ 209,364	$ 1,636,626	3.26	15.07	18.33	$ 996,161	$ 307,205	$ 1,303,366	43.81	$ 2,939,992
Facility Operations														
Utilities	3.44	$ 266,372	$ 14,757	$ 33,985	$ 14,558	$ 329,672	0.00	1.29	1.29	$ 63,990	$ 142,764	$ 206,754	4.73	$ 536,426
Roads	3.05	$ 136,956	$ 14,757	$ 15,686	$ 8,078	$ 175,477	0.00	(0.31)	(0.31)	$ (16,091)	$ 149,412	$ 133,321	2.74	$ 308,798
Janitorial	3.26	$ 131,980	$ -	$ -	$ 2,622	$ 134,602	0.00	0.86	0.86	$ 25,336	$ 104,420	$ 129,756	4.12	$ 264,358
Buildings	3.59	$ 115,862	$ 14,757	$ -	$ 73,905	$ 204,523	0.00	0.51	0.51	$ 31,703	$ 86,891	$ 118,594	4.10	$ 323,118
Fleet	1.73	$ 101,261	$ -	$ -	$ -	$ 101,261	0.00	0.14	0.14	$ 4,830	$ 110,050	$ 114,880	1.87	$ 216,141
Trails	2.70	$ 54,380	$ 37,661	$ -	$ 2,060	$ 94,101	0.00	2.04	2.04	$ 57,231	$ 43,200	$ 100,431	4.74	$ 194,532
Campgrounds	3.26	$ 144,075	$ -	$ -	$ 6,413	$ 150,488	0.00	1.07	1.07	$ 34,383	$ 55,409	$ 89,792	4.33	$ 240,279
Grounds	2.24	$ 98,458	$ -	$ -	$ 3,139	$ 101,597	0.00	1.21	1.21	$ 37,846	$ 44,625	$ 82,471	3.45	$ 184,068
Mgmt. and Admin.	1.79	$ 121,574	$ 686	$ -	$ -	$ 122,260	0.00	(0.37)	(0.37)	$ (5,247)	$ 14,232	$ 8,985	1.42	$ 131,245
	25.06	$ 1,170,917	$ 82,618	$ 49,670	$ 110,774	$ 1,413,980	0.00	6.44	6.44	$ 233,981	$ 751,003	$ 984,984	31.50	$ 2,398,964
Maintenance														
Roads Maintenance	2.17	$ 106,350	$ 58,724	$ 6,334	$ 4,503	$ 175,911	0.00	1.13	1.13	$ 26,048	$ 545,165	$ 571,213	3.30	$ 747,124
Buildings Maintenance	3.53	$ 28,500	$ 157,741	$ -	$ 89,433	$ 275,674	0.00	1.05	1.05	$ 50,181	$ 103,560	$ 153,741	4.58	$ 429,416
Fleet Maintenance	0.89	$ 50,377	$ 22,292	$ 60,392	$ -	$ 133,060	0.00	1.06	1.06	$ 54,988	$ 93,250	$ 148,238	1.95	$ 281,298
Trails Maintenance	5.21	$ 72,861	$ 100,143	$ -	$ 15,514	$ 188,518	2.27	0.00	2.27	$ 91,559	$ 53,300	$ 144,859	7.48	$ 333,378
Utilities Maintenance	1.72	$ 55,668	$ 328,118	$ 20,946	$ 5,851	$ 410,583	0.00	0.94	0.94	$ 40,539	$ 56,810	$ 97,349	2.66	$ 507,932
Mgmt. and Admin.	1.29	$ 78,365	$ -	$ -	$ -	$ 78,365	0.00	0.21	0.21	$ 34,691	$ 17,300	$ 51,991	1.50	$ 130,356
	14.81	$ 392,122	$ 667,017	$ 87,672	$ 115,301	$ 1,262,112	2.27	4.39	6.66	$ 298,007	$ 869,385	$ 1,167,392	21.47	$ 2,429,504
Management and Administration														
Communications	4.15	$ 212,240	$ 6,375	$ -	$ -	$ 218,615	0.23	2.64	2.87	$ 160,852	$ 51,000	$ 211,852	7.02	$ 430,466
Parkwide Planning	2.63	$ 179,203	$ -	$ -	$ -	$ 179,203	0.00	2.36	2.36	$ 179,493	$ 5,700	$ 185,194	4.99	$ 364,396
Parkwide Safety	0.37	$ 23,025	$ -	$ -	$ -	$ 23,025	0.00	0.85	0.85	$ 61,136	$ 45,300	$ 106,435	1.22	$ 129,460
General Management	2.10	$ 143,813	$ -	$ -	$ -	$ 143,813	0.00	1.09	1.09	$ 88,077	$ 4,000	$ 92,076	3.19	$ 235,889
General Administration	5.34	$ 288,439	$ 4,718	$ -	$ 13,756	$ 306,912	0.00	1.32	1.32	$ 64,918	$ 16,000	$ 80,918	6.66	$ 387,830
External Affairs	0.38	$ 35,477	$ -	$ 203	$ -	$ 35,679	0.00	0.49	0.49	$ 54,740	$ 11,000	$ 65,740	0.87	$ 101,419
Financial Management	1.03	$ 59,910	$ -	$ -	$ -	$ 59,910	0.00	(0.06)	(0.06)	$ (3,047)	$ 1,000	$ (2,047)	0.97	$ 57,863
	16.00	$ 942,105	$ 11,093	$ 203	$ 13,756	$ 967,156	0.23	8.69	8.92	$ 606,169	$ 134,000	$ 740,169	24.92	$ 1,707,324
TOTAL FOR BIG BEND	97.36	$ 4,368,306	$ 1,178,558	$ 187,519	$ 504,272	$ 6,238,655	18.65	48.36	67.01	$ 3,564,206	$ 2,345,743	$ 5,909,949	164.37	$ 12,148,604

Summary Financial Statement

Rio Grande Wild and Scenic River

Functional Area	AVAILABLE FTE	ONPS Base	Project	Reimbursable	Revenue	Total	Detailed FTE Shortfall Breakout: Non-Perm	Perm	SHORTFALL / (SURPLUS) FTE	Labor $	Non-Labor $	Total $	REQUIRED FTE	Total $
Rio Grande Wild and Scenic River														
Visitor Experience and Enjoyment	0.71	$ 56,733	$ -	$ -	$ -	$ 56,733	0.00	0.22	0.22	$ 66,688	$ 7,450	$ 74,138	0.93	$ 130,871
Resource Protection	1.04	$ 47,561	$ -	$ -	$ -	$ 47,561	0.00	2.31	2.31	$ 79,664	$ 7,450	$ 87,114	3.35	$ 134,675
Management and Administration	0.27	$ 20,059	$ -	$ -	$ -	$ 20,059	0.00	0.01	0.01	$ 2,974	$ -	$ 2,974	0.28	$ 23,032
TOTAL FOR RIGR	2.02	$ 124,352	$ -	$ -	$ -	$ 124,352	0.00	2.54	2.54	$ 149,325	$ 14,900	$ 164,225	4.56	$ 288,578

Note 1. Basis of Accounting
This financial statement has been prepared from the books and records of the National Park Service in accordance with NPS accounting policies. The resources available reflect the total operations and maintenance costs incurred by the park during fiscal year 2000. The resources required are intended to represent the funding needed to operate the park while fully meeting park defined operational standards. Program requirements are presented as a 5-year planning tool based on FY2001 salary and wage tables, current resource inventories, and the current park infrastructure. Changes resulting from one- time projects and capital improvements (e.g., investments) will have a resulting impact on the operational requirements presented.

Note 2. Activity- based Accounting versus Standard Book- based Accounting
The financial data represented here might not necessarily match up directly with the historical analysis section. For example, the historical expenses analysis determined that FY2000 expenses at Big Bend totaled $6.18 million; however, the total FY2000 expenses outlined by the functional area analysis is $6.24 million. The difference is not due to financial miscalculations, but the result of the activity- based analysis which looks at individual programs and the costs associated with them versus the typical book- accounting format, which does not accurately associate costs with specific activities. The additional expenses at Big Bend were funded by Rio Grande Wild and Scenic River funds. As a result, the RIGR functional area analysis shows fewer expenses than the RIGR historical analysis section. The sum of total expenses for both Big Bend and RIGR will equal each other in both analyses.

Note 3. FY2000 FTE Availability
The FY2000 FTE availability does not take into account employees who were hired mid- year or at another time in FY2000. These employees only show a 'shortfall' because they were not present for part of the year in FY2000. Since they have been with Big Bend for the duration of FY2001, these employees should not necessarily be represented as a shortfall in FY2000. As a result, FTE availability for FY2000 should be increased by 9.09, which would decrease the FTE shortfall to 57.92.

Note 4.
In FY2001, the adjusted ONPS base for Big Bend was $4,509,000. ONPS Base for the RIGR remained the same, at $187,000.

Note 5.
As described in detail on page 16, the dollar value of volunteer hours contributed in FY2000 was $649,650.

Investment Priorities

Unmet Investment Needs

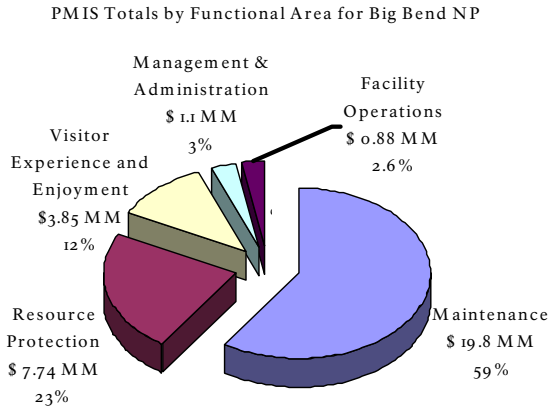
Big Bend National Park ranks 15th in size out of 384 national parks. Due to its size and the location of its significant attractions, the park operates three outlying districts in addition to the main visitor center operation and employee residence area. When combined with an increase in visitation, regulatory requirements, and operations, the aging infrastructure, from sewer treatment facilities to campgrounds, has resulted in an investment need of $11.8 million for the park's most important projects. (Table 2) The greatest investment needs at Big Bend are concentrated in the Facilities Maintenance and Resource Protection areas. The maintenance required to rehabilitate the Park's aging sewer and water treatment facilities, buildings, and historic structures up to established codes and according to regulations is a very expensive task. The spinoff of a Science and Resource Management division in 1992 and the resulting increased emphasis on resource protection resulted in the need for large investments to provide adequate facilities and sufficient funding for projects.

The total project investment need for Big Bend is $33.4 million and is broken down by functional area in the pie chart to the right. The investments cover a broad range of activities including cultural and natural resource preservation, equipment replacement, communications equipment, law enforcement initiatives, and housing improvements. The projects range in cost from $3,400 to $3,200,000.

An unaddressed priority for Big Bend involves the ability of the park to house additional employees. The current demand for employee housing already exceeds supply. In order to adequately house the additional identified personnel needs, Big Bend will have to commit funds to build additional housing, either inside or outside the park's boundaries.

Table 2: Top 6 Investment Priorities at Big Bend National Park

Priority	Project Description	Cost
1	Construct Research Center and Curatorial Facility	$ 1,850,000
2	Replace and Upgrade Chisos Basin Sewage Treatment Plant	$ 2,200,000
3	Redesign and Rehabilitate the Chisos Basin Campground	$ 3,167,000
4	Relocate Underground Primary Power to Chisos Basin Area	$ 1,225,000
5	Upgrade Panther Junction Water System	$ 2,407,000
6	Upgrade Rio Grande Village Water Treatment System	$ 1,427,000
	Total	**$11,776,000**



PMIS = Project Management Information System

GPRA

B. Chambers

The purpose of the Government Performance and Results Act of 1993 (GPRA) is to make government more effective and efficient. It connects goal setting with operations by making clear what an organization's mission is, what its goals are and what success looks like before taking action. Goals have dollars and FTEs attached to them and an analysis of GPRA at Big Bend has established that the park focuses most of its dollars on activities that concentrate on the GPRA goal which stresses visitor safety and enjoyment (More than $3 million). This is a direct result of the extensive visitor- driven activities such as interpretative talks, visitor center operations, visitor protection and facility operations at campgrounds, on roads and on trails. The second most funded GPRA goal is the one which stresses natural and cultural preservation and protection (About $1 million). Finally, the third most funded GPRA goal stresses using current management practices and technologies to accomplish its mission (About $800,000).

Financial Strategies

In order to adhere to the Park Service's mission of preserving the natural environment for generations to come, the park staff should pursue long- term strategies and practice long- term thinking. However, the current one- year funding system is inhibiting employees from thinking anywhere beyond one year. There is a disparity between the reality of using funds that have a one- year lifespan versus the idealism of keeping the parks intact for hundreds of years to come. Fortunately, with a proper adjustment in the approach, the Park Service will be able to continue fulfilling its mission.

Therefore, concurrent to seeking external funds, Big Bend and the Park Service should look at what they can do to improve operations from within. Such insight will provide the park's staff with a firm understanding of how the park is operating and how it should be operating. This section has been divided into two separate parts – one that focuses on financial strategies and the second that focuses on operational strategies. The financial strategies are designed to provide a more immediate increase in monetary resources while the operational strategies will help increase productivity and lead to more effective decision making.

Financial Strategies

1) Cost Benefit Analysis

Many businesses review activities prior to implementation to determine which one is the most cost effective. The Park Service does not consistently review the costs and benefits of different activities that are currently done or to be undertaken. The result is that many activities, which might prove less beneficial, are undertaken prior to the consideration of alternatives.

Conclusion: Big Bend should identify the major cost drivers and utilize a cost- benefit analysis to determine which way to perform certain activities. A thorough review of the activities currently taking place could also help to determine those activities that might be less expensive if they were contracted to an outside company.

2) Grant and Fund Raising Activities

Many organizations award grants to help support associated causes. The process of researching, applying for and receiving grants is a lengthy one, and the current shortfalls that many national parks are experiencing prevent them from the aggressive pursuit of this resource. Many corporations and individuals are also interested in supporting causes that are of interest to them, their families, their employees or significant stakeholders. One of the most recognized and popular federal agencies is the National Park Service. Currently, many parks within the National Park Service have sizable endowments to assist with parkwide operations. At Big Bend, the pursuit of outside funds, grants and donated monies is an effort undertaken by the Big Bend Natural History Association (BBNHA) and the Friends of Big Bend National Park (FBBNP).

Conclusion: Big Bend's division chiefs should provide detailed information to the BBNHA and Friends Group to help provide guidance in their pursuit of grants and funding to aid the park. Additionally, the establishment of an endowment would provide a consistent flow of funding to support operations, ensure that projects are completed in a timely manner, and provide lasting recognition for the companies and individuals that contribute.

3) Partnerships

Partnerships with outside organizations and companies are helping to provide support for many projects undertaken throughout the National Park Service. Currently, Big Bend receives some support from outside organizations but not to the extent that is possible. Public- private partnering would help to support and protect the great natural and cultural resources of Big Bend National Park and provide the companies and organizations with an opportunity to be associated with supporting a national park.

Conclusion: The BBNHA and FBBNP should approach those companies that could provide a benefit to visitors or help protect resources at Big Bend. Approaching rental car companies located in Midland, Texas, and El Paso, Texas, or the major airline providing service to these cities could help increase awareness of Big Bend and provide a unique opportunity for these companies. Companies that are involved in water conservation, solar power, GPS mapping, or handheld computers could also be potential candidates for partnering.

Operational Strategies

1) More Accurate Accounting System for Activities

More and more businesses these days are altering their view on how to gauge the health of their operation. Instead of evaluating the status of an entire division, businesses are breaking divisions into smaller activity- based programs so that they can understand just how well a specific activity is performing. With a more detailed and accurate picture of their operations, businesses can realign resources or readjust operating priorities to harmonize the results of the activity- based analysis with what is actually occurring. In order to justify its shortfalls and limitations, Big Bend needs to evaluate park operations on an activity- based format. This way, the park will be able to accurately gauge whether a program is overfunded, underfunded or on target. This can be accomplished by continuing the business plan accounting process.

Conclusion: Big Bend needs to understand where its strengths and weaknesses lie. This can only be accomplished by evaluating the park's operations in an activity- based format by tracking funds and expenses associated with each operation. (*the Emergency Medical Services strategy below serves as an example*)

2) Emergency Medical Services (example of the above)

Although Big Bend's EMS account had a budget of $8,500 in FY2000, actual costs associated with EMS operations were $71,000. This total includes salaries, benefits, overtime, supplies, equipment and the rental of an ambulance. EMS is essential at Big Bend. The park's isolation does not allow visitors or residents to make a quick run to the hospital, which is more than 100 miles away. As a result, Big Bend requires highly trained and capable emergency medical technicians to provide temporary relief or assistance to a patient either in the park or while in route to the nearest hospital. In FY2000, the park had 77 EMS runs – 26 of which were ambulance runs. Even though the park bills ambulance patients, only three of these ambulance runs were ever collected. In addition, although the park collected on three of the ambulance runs, it was only allowed to use those funds for that specific fiscal year before the funds were transferred to the U.S. Treasury. Generally, if a patient or their insurance company, reimburses the park for an ambulance run in a year other than the year the incident occurred, the park will not see that money. The reality of the situation is that certain activities have specific costs. Most insurance companies pay for ambulance runs. If the 26 patients who used the ambulance in FY2000 had been charged an average $400 fee, the park would have at least recouped $10,400 of its costs. Other national parks have formed partnerships with local hospitals in which the hospital collects a patient's insurance information and follows up on the status of the payment. The parks are reimbursed by the hospital and are therefore guaranteed payment to cover the costs of at least the ambulance run.

Conclusion: Big Bend should partner with Big Bend Regional Medical Center and have the medical center collect all insurance claims for ambulance runs and transfer the funds to Big Bend.

3) Business Training and Education

As part of becoming a more efficient organization, Big Bend needs to look at its operations with more of a business mentality. This does not mean that the park's mission should be dollar- focused profit- maximization; what it does mean is that the park should maximize shareholder value by thinking long- term. If, for example, two different projects need funding, the logical method of choosing which project to pursue would be to determine which project is more urgent. Sometimes, however, urgency is not the best criterion. Such solutions might not always be appropriate because they are geared towards solving short- term problems versus long- term ones. Therefore, the superintendent, the division chiefs, supervisors and other managers should attend business seminars or business courses to learn about better business decision- making skills, such as present value analyses, operational management skills, alternate methods of accounting, etc.

Conclusion: Big Bend should send its management team annually to seminars or classes (perhaps online classes) that focus on better business management techniques.

4) Performance Reviews

Reviewing an employee's performance is a critical component in any work environment. If a specific employee is not meeting established standards, then their supervisor needs to understand why and needs to be able to communicate how the situation can be rectified. Also, without historical records a supervisor might not be able to make the proper decision in matters concerning salary increases or promotions. Similarly, if an employee is not moving ahead in the organization, they might not understand why unless they are clearly informed via performance reviews. Performance reviews provide insight into how employees can improve their skills and advance in the workplace. Better informed employees will have more leverage when it comes to applying for promotions or when requesting additional employee development, such as training. In addition, performance reviews should focus not only on subordinates, but also on supervisors. Anonymous reviews of superiors by subordinates and peers could provide valuable information about current management styles or issues before they become destructive to the park's morale and work environment. A comprehensive and management-team- supported appraisal system for employees, supervisors, and division chiefs will improve employee morale and performance, assess leadership potential, and provide valuable information to current park employees in leadership positions.

In addition to performance reviews, recognition of employees is also critical. Recognizing employees is an easy way to show everyone the right thing to do. Recognition of an exemplary work ethic, positive attitude, or outstanding work on a project should not be viewed as unfair. For example, when a specific employee exhibits exemplary on- the- job safety procedures and is rewarded, others will follow suit once they realize that such behavior will earn them a reward and the respect of senior management.

Conclusion: Big Bend should institute an annual, comprehensive, and customized review of employees and supervisors and semi- annual, one- page reviews that highlight current activities and progress toward developmental goals. Also, tying the performance reviews to a rewards system would help improve the participation and satisfaction with the review process.

Credits

Frank Deckert
Superintendent

Lisa Carrico
Chief of Administrative Services

Jim Erickson
Chief of Facilities Management

Lisa Bigley
Chief of Interpretation & Visitor Services

Vidal Davila
Chief of Science & Resource Management

Mark Spier
Acting Chief of Visitor & Resource Protection

Lou Good
Management Assistant

Tom VandenBerg
Park Ranger, Interpretation

Bruce Schuler
Rice University, Jones Graduate School of Business '02

Dieter Fenkart- Froeschl
Columbia Business School '02

Everyone involved with compiling detail sheet information.

All photos NPS unless otherwise noted.

...And the rest of the Big Bend National Park staff!

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- Park Foundation, Inc.
- The David & Lucile Packard Foundation
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- Big Bend Natural History Association
- Friends of Big Bend National Park

Big Bend Website

- Park Maps
- Road Conditions
- Live Camera View
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- River Levels
- Campground Status
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